

FIG. 2

102

2/55



FIG. 2

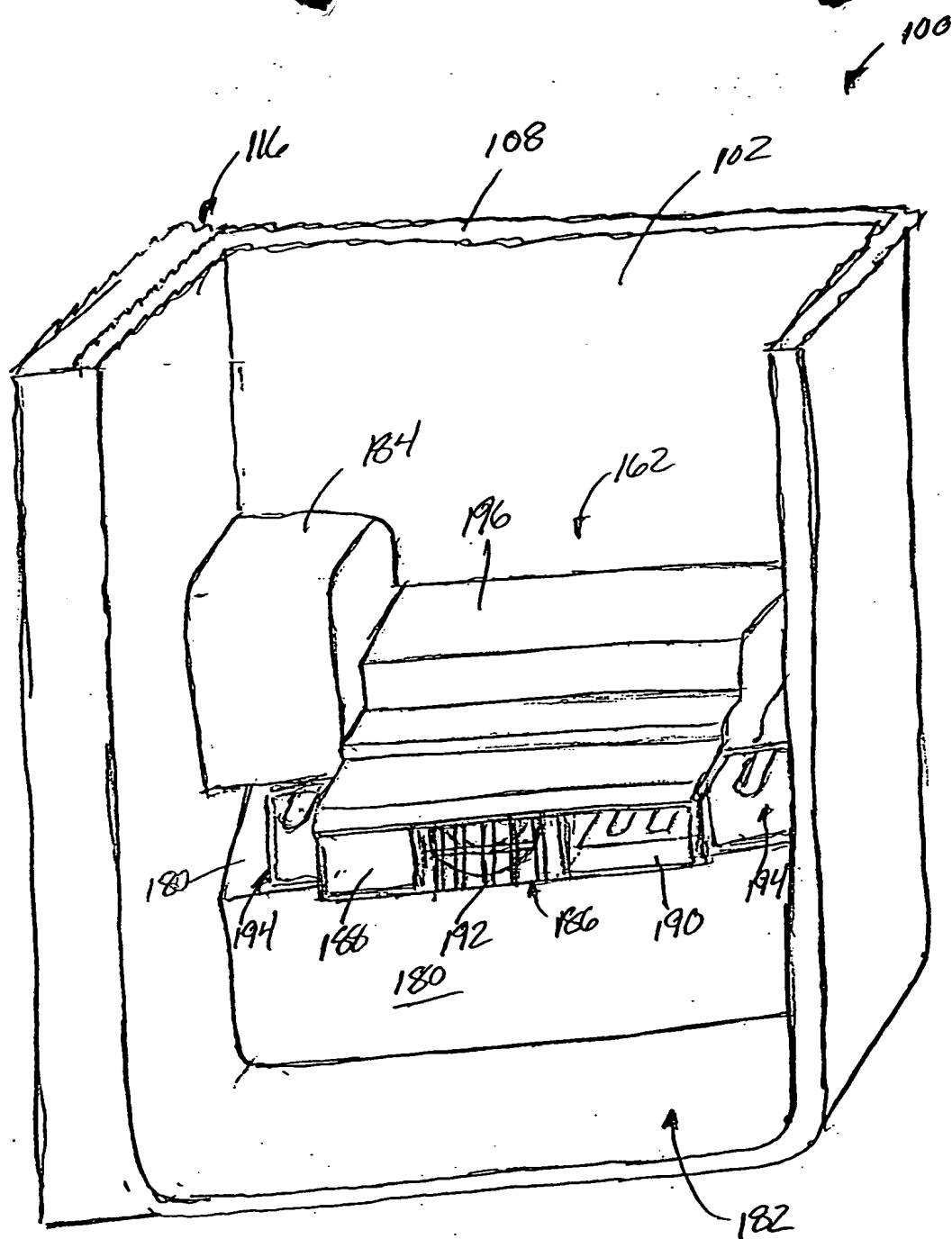


FIG. 3



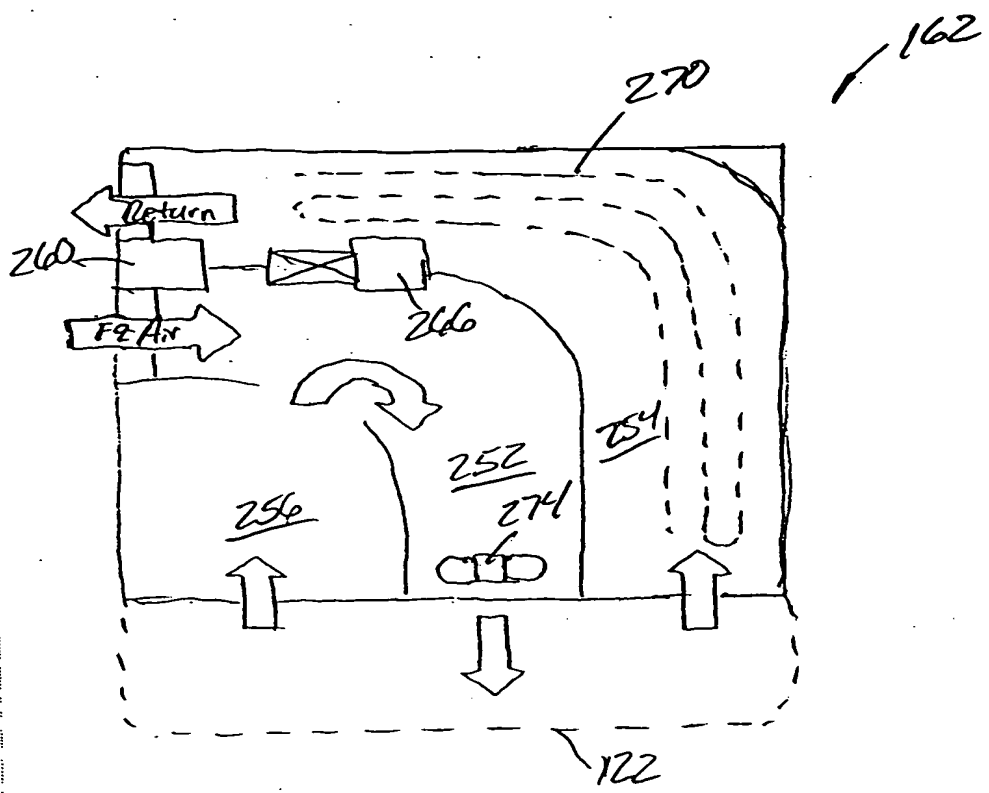


FIG. 5

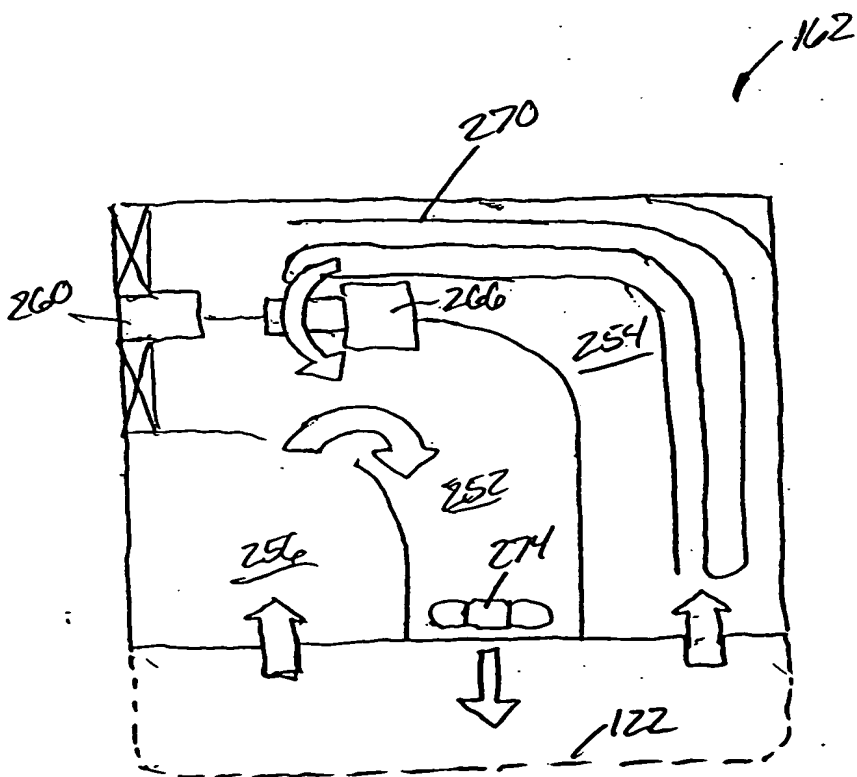


FIG. 10

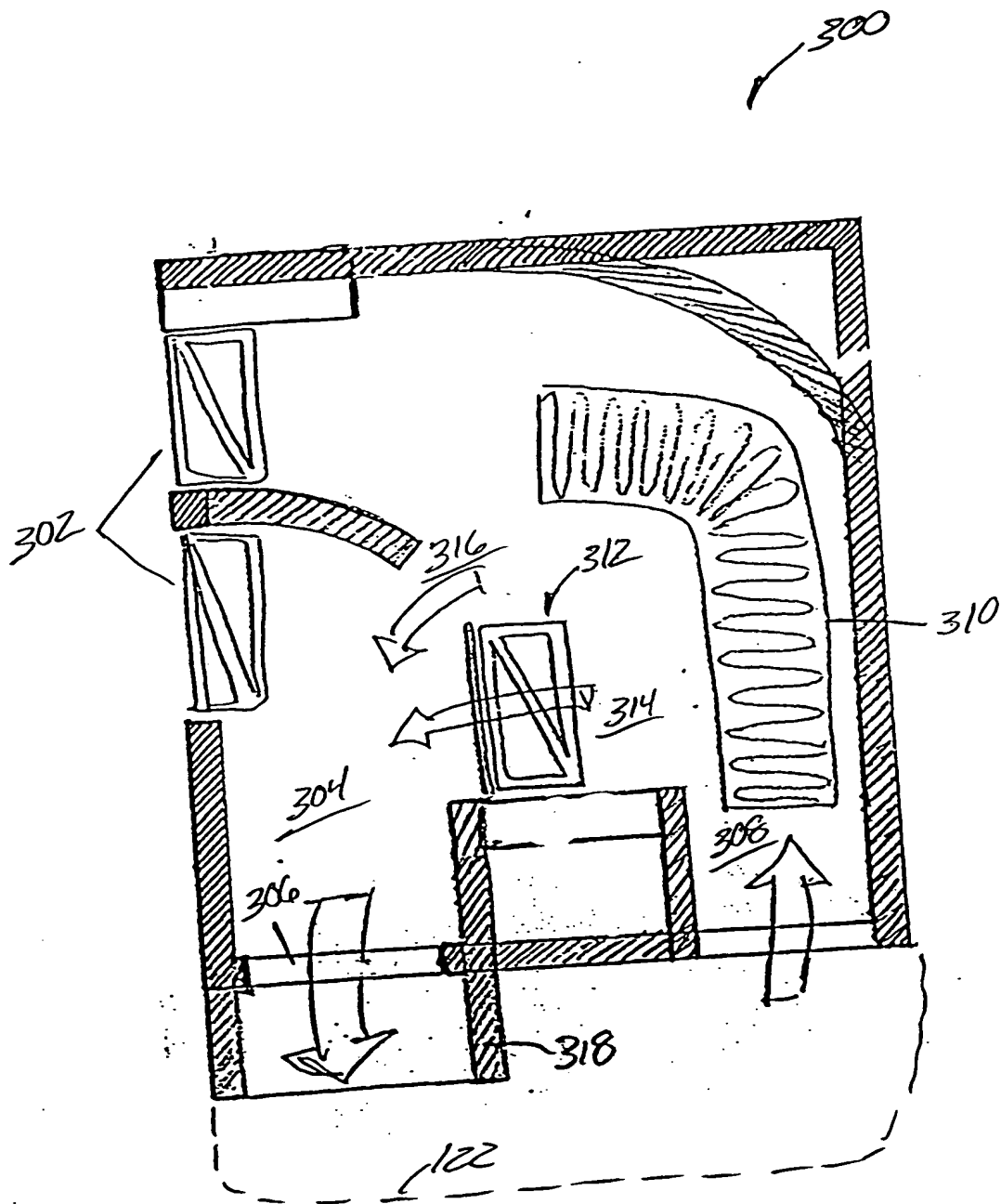
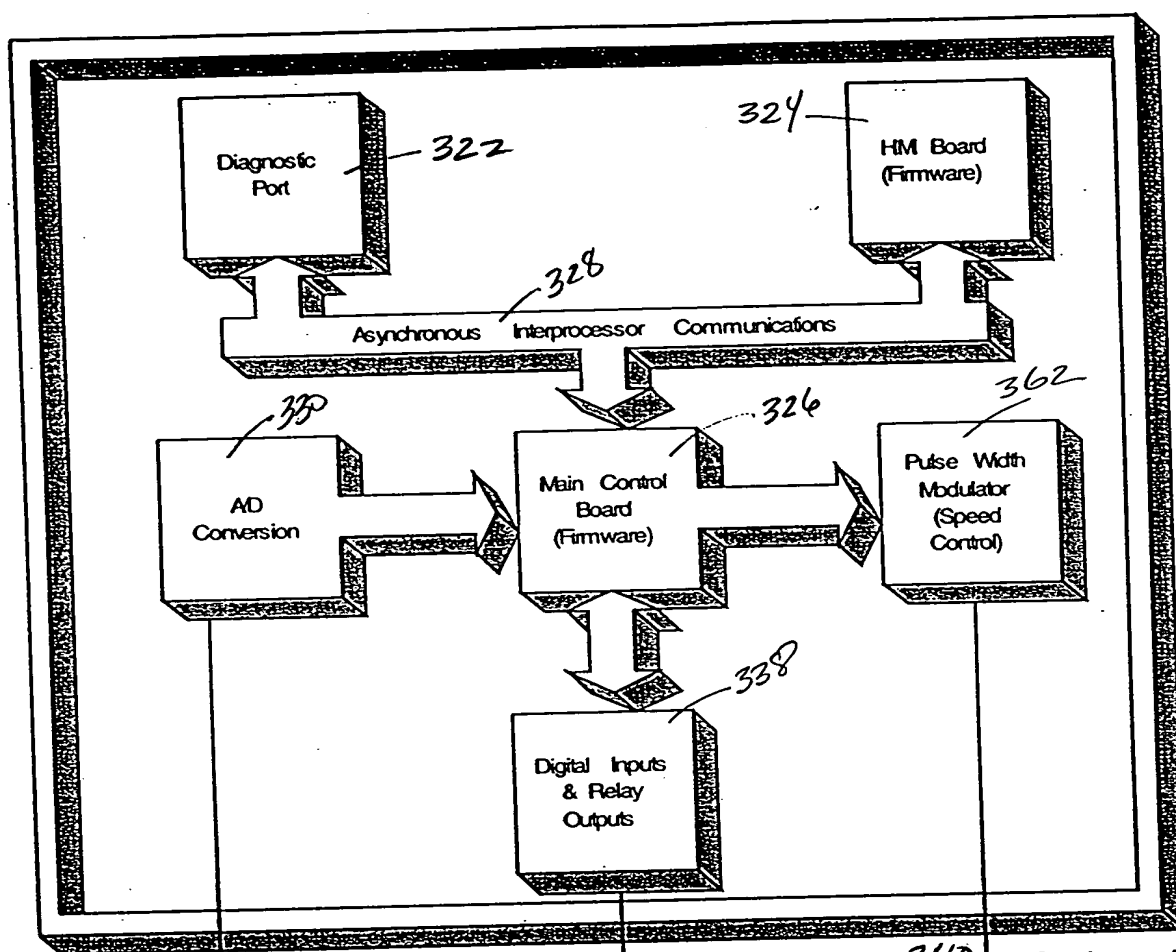


FIG. 7

320

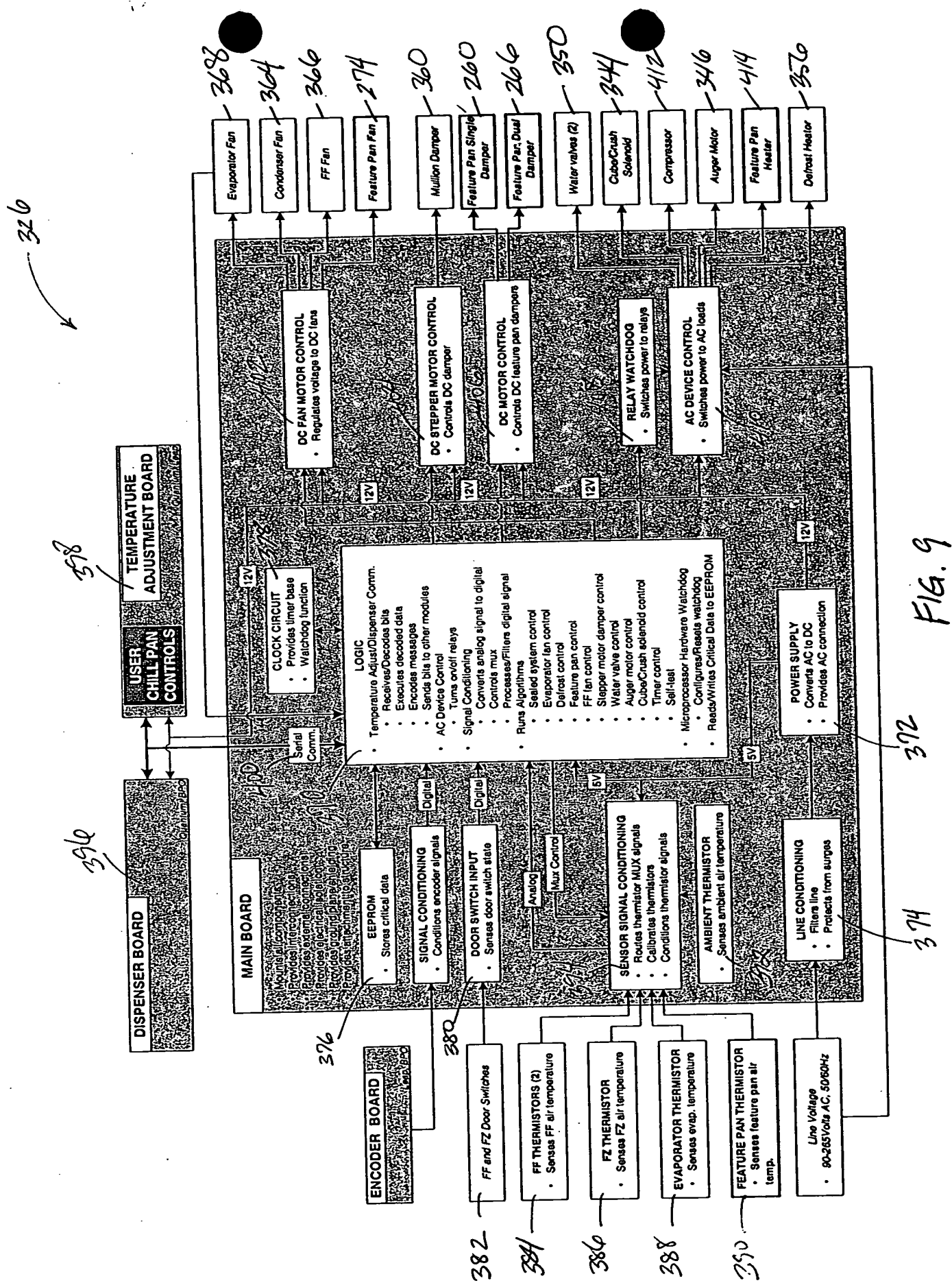


- FF Temp 2 - 332
- FF Temp - 332
- Feature Pan Temp - 276
- FZ Temp - 334
- Evap. Temp - 336

- Cond. Fan Tach. - 340
- Evap. Fan Tach. - 342
- Crusher Solenoid - 344
- Auger Motor - 346
- Personality Inputs (Site Specific) - 348
- Water Dispenser Valve - 350
- Encoders for Set Points - 352
- Compressor On/Off - 354
- Defrost Heater - 356
- Door Detector - 358
- Muffin Damper - 360
- Feature Pan Damper 1 - 260
- Feature Pan Damper 2 - 266
- Feature Pan Heater - 270
- Condensor Fan - 364
- FF Fan - 366
- Evaporator Fan - 368
- Feature Pan Fan - 274

FIG. 8

SS/8





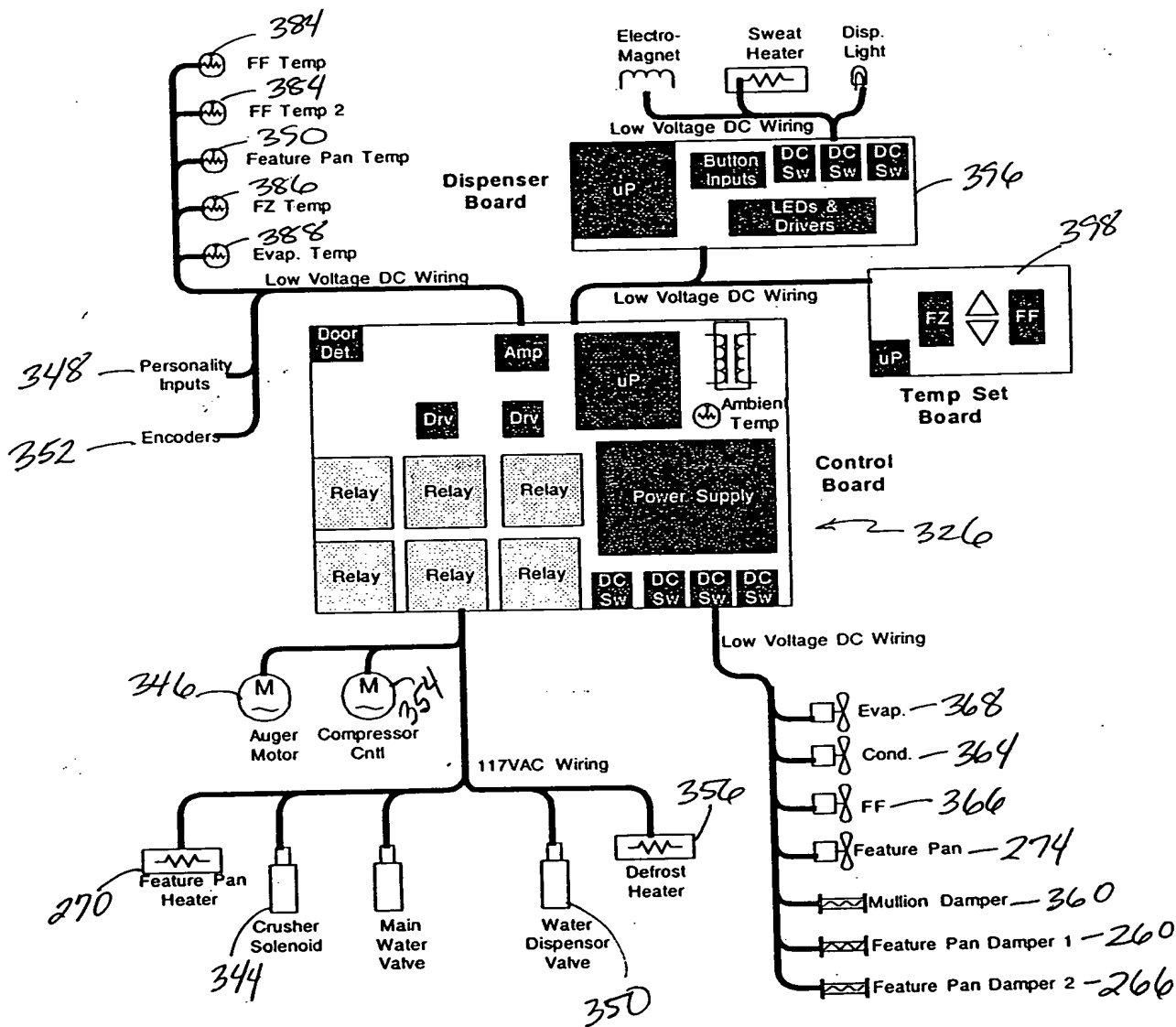
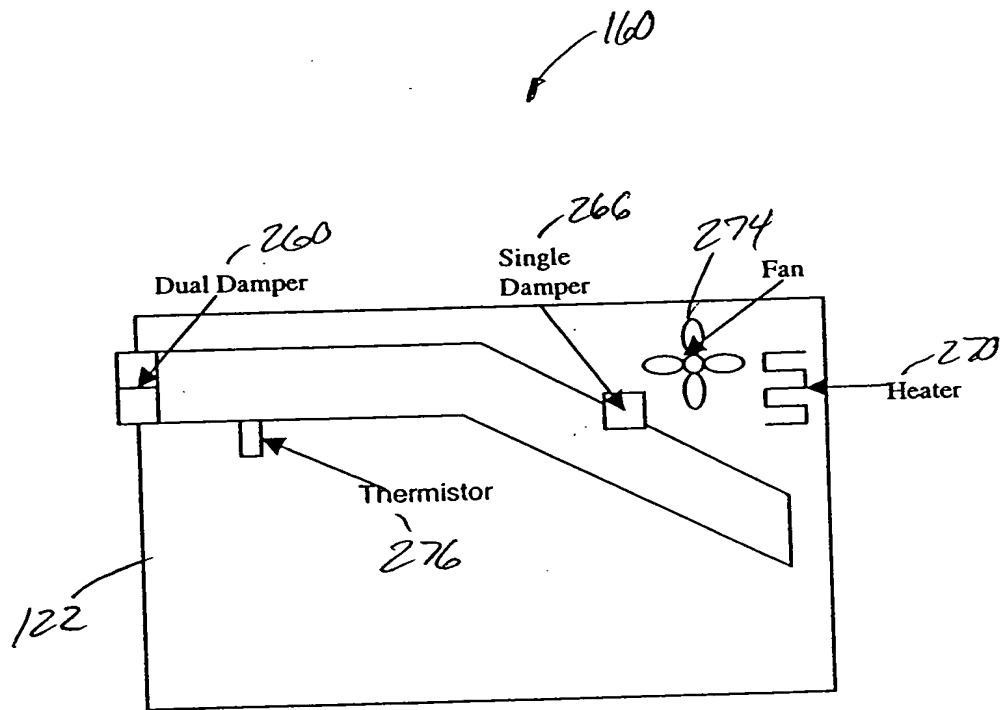


Fig 10



**Fig. //**

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416

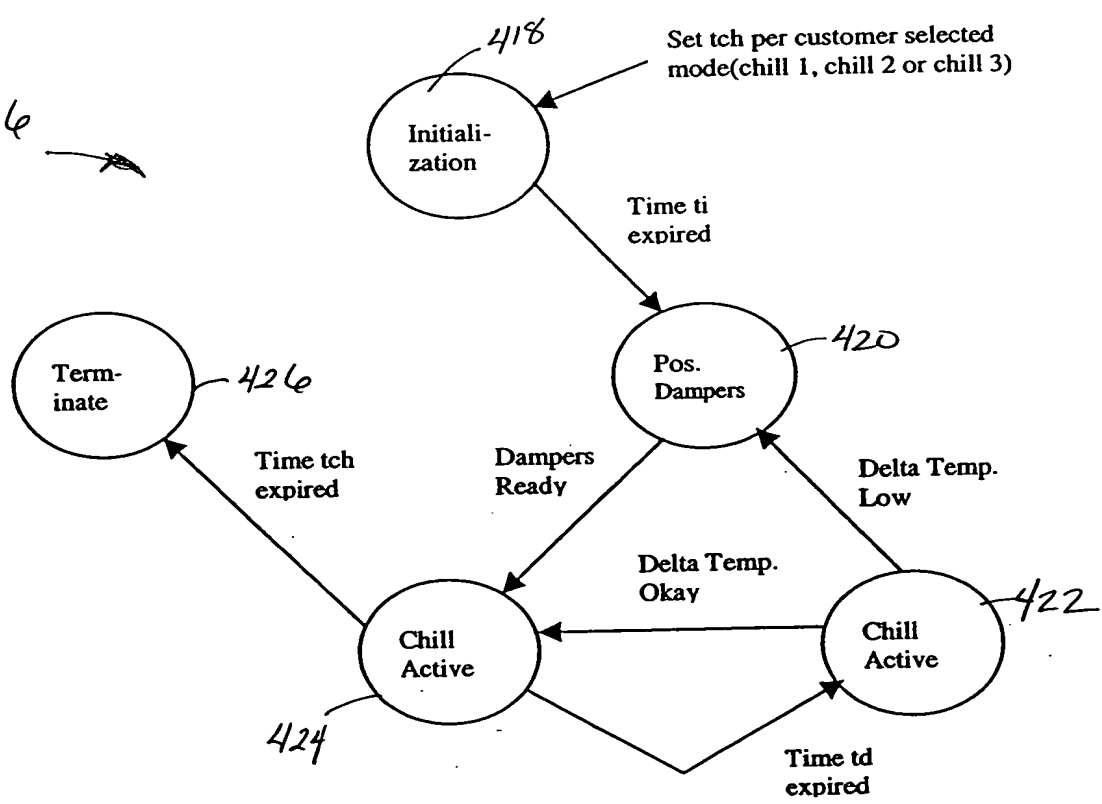
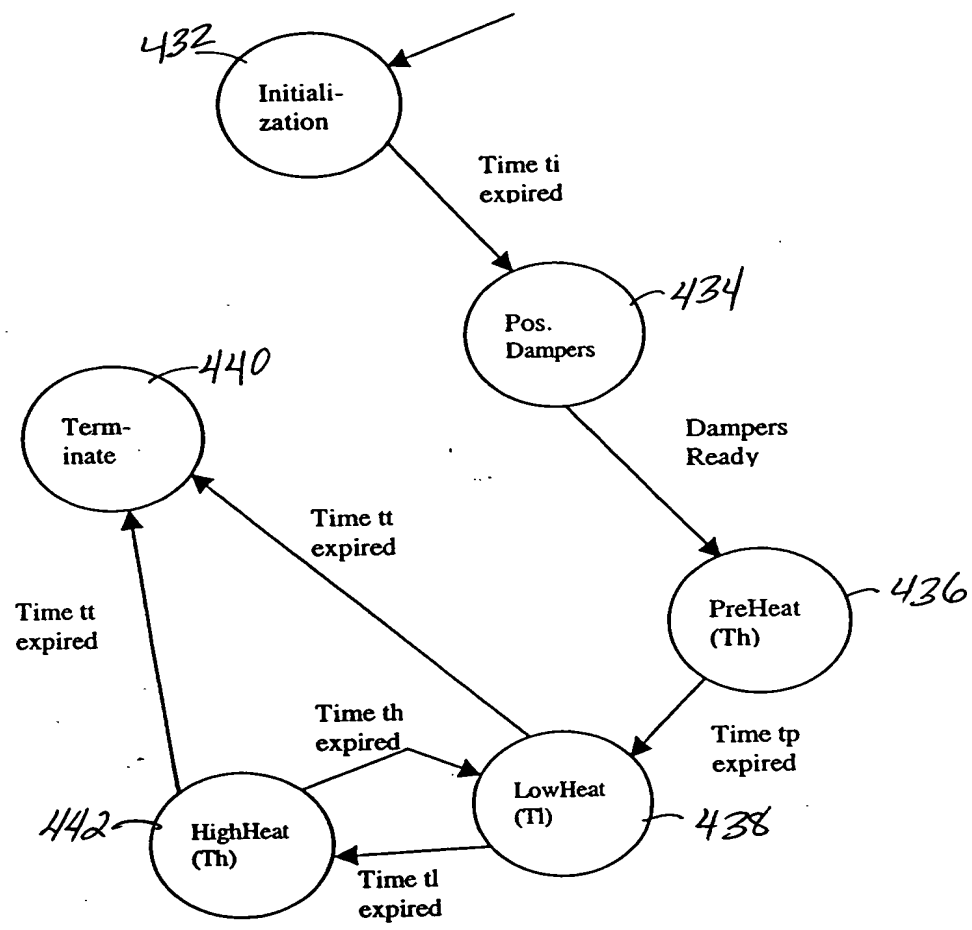


Fig. 12

430



**Initialization:** Shuts off heater and turns on fan. This mode is implemented so that the customer interface LED that is wired in parallel with the fan will turn on as soon as the button is hit. Time ti is the initialization time and will typically be approximately one minute.

**Pos. Dampers:** This state shuts off the fan, sets the single damper open then closes the dual damper. It then turns the fan back on. This is done for power management.

**PreHeat:** This state regulates the pan temperature

**LowHeat**

**HighHeat:**

**Terminate:** This mode closes both dampers and shuts off the fan then returns to idle.

Fig. 13

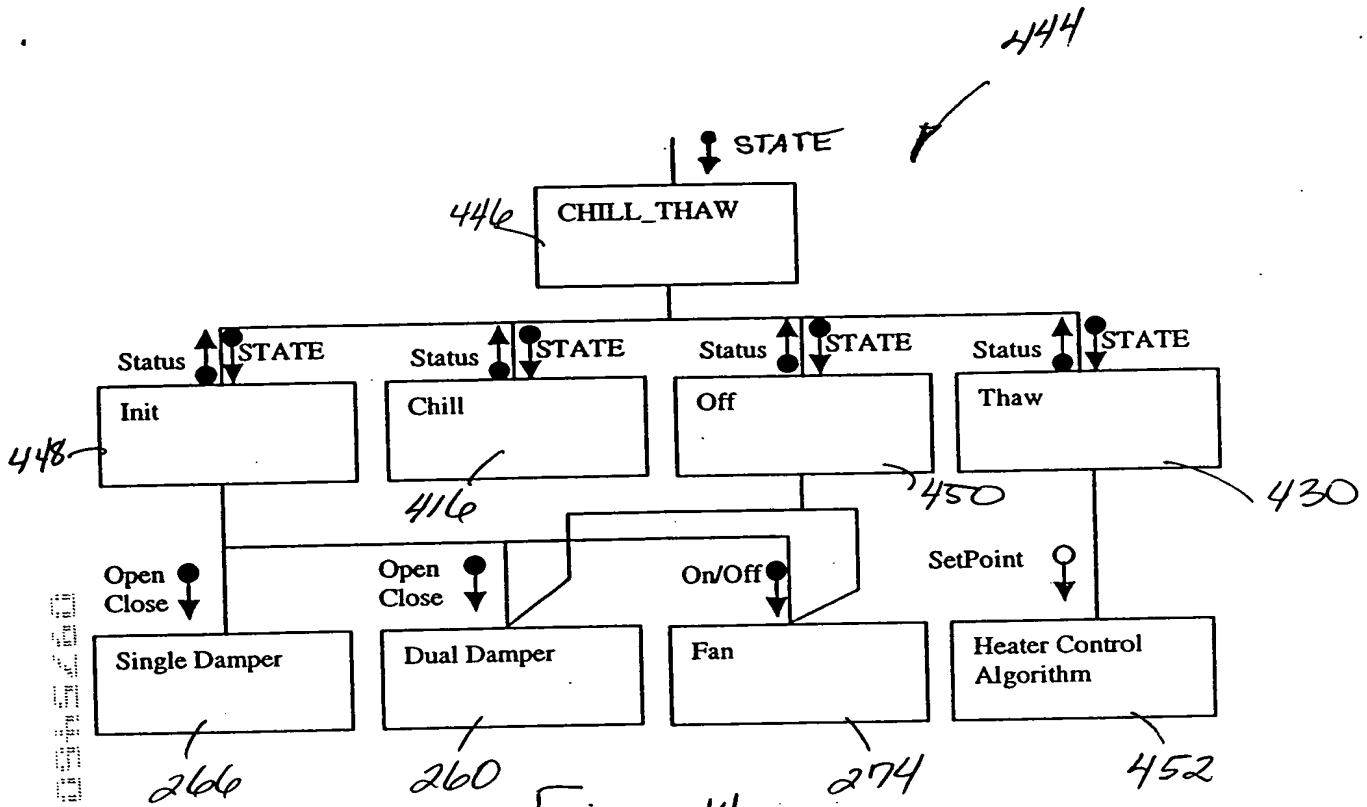


Fig. 14



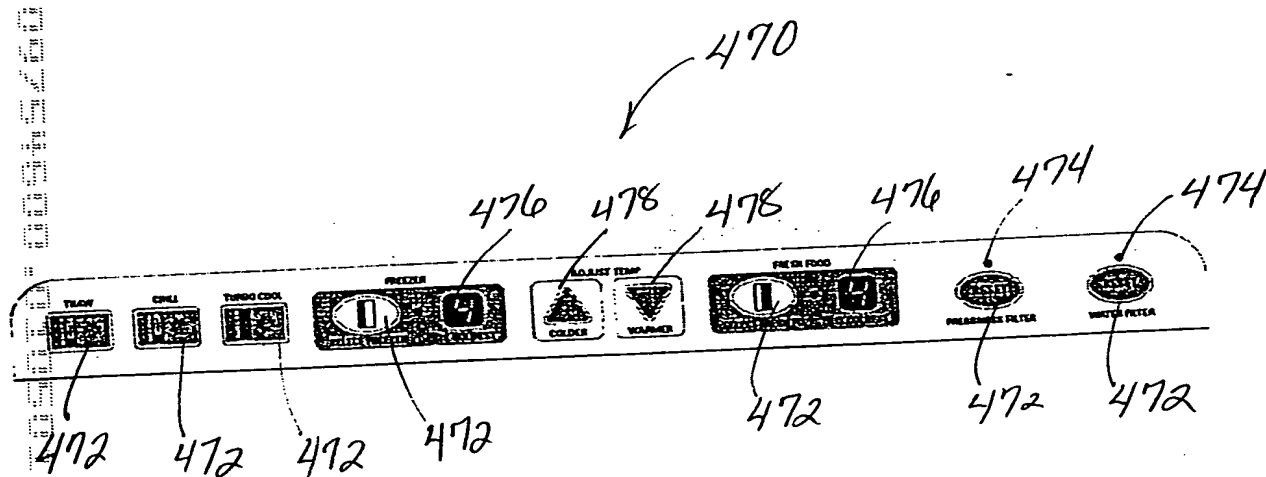


Figure 17.

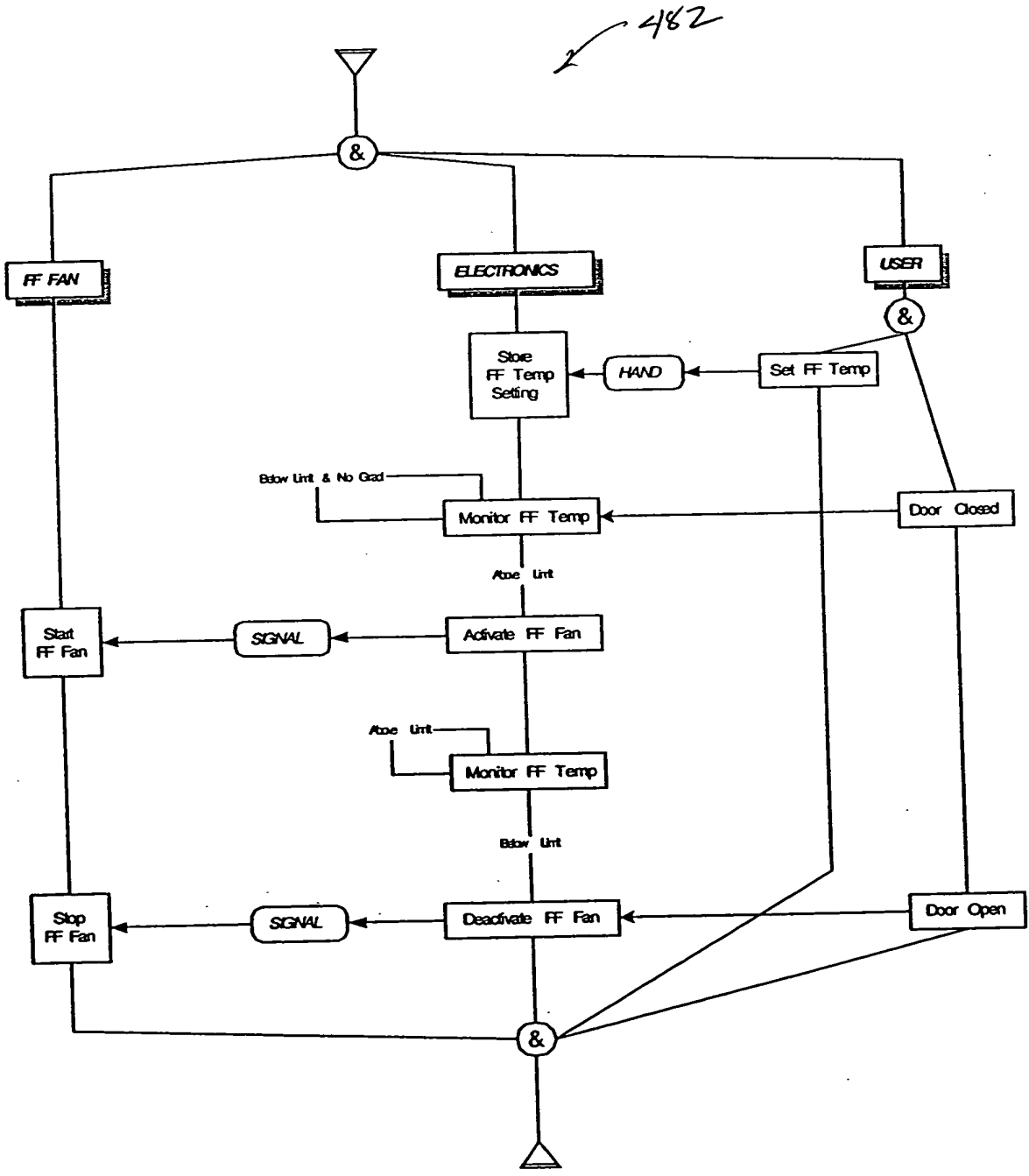
14/55



Fig 18



17/55



Fresh Food Fan Behavior Diagram

Fig 19

2 ← 484



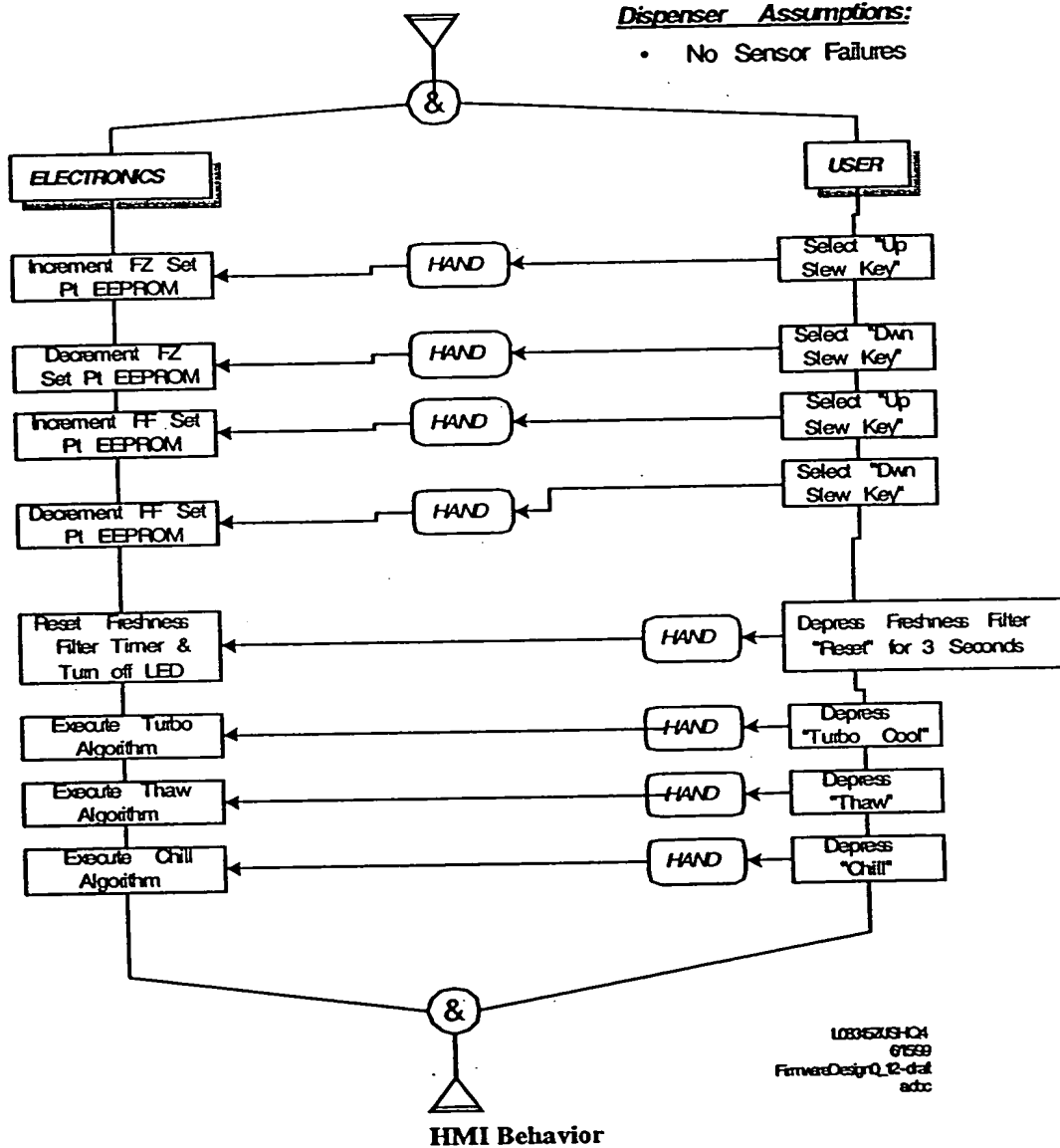
Fig 20

4/8/0

19/55

Dispenser Assumptions:

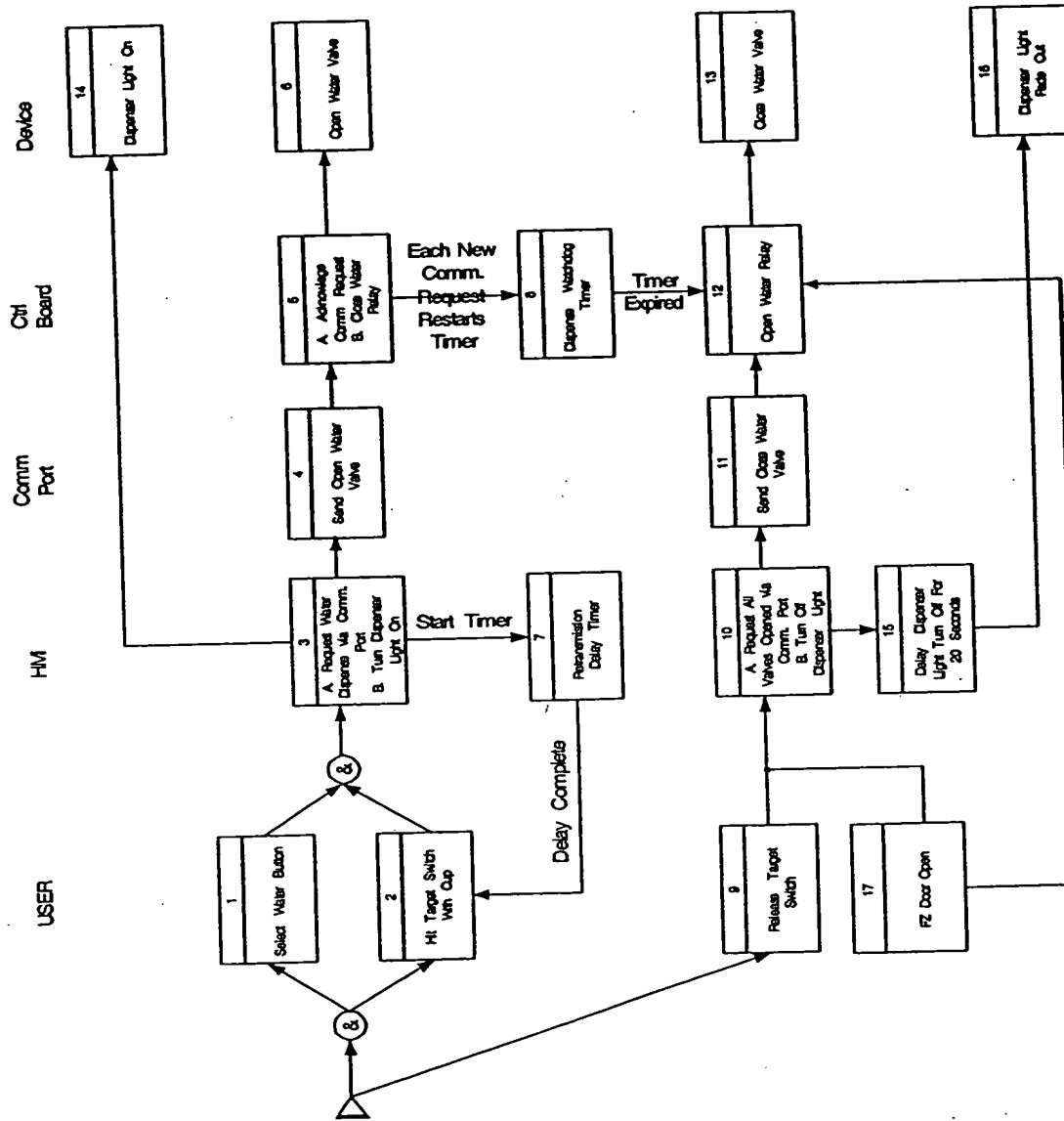
- No Sensor Failures



108362USH-04  
67599  
FirmwareDesignQ\_12-dat  
adc

Fig 21

88-4186



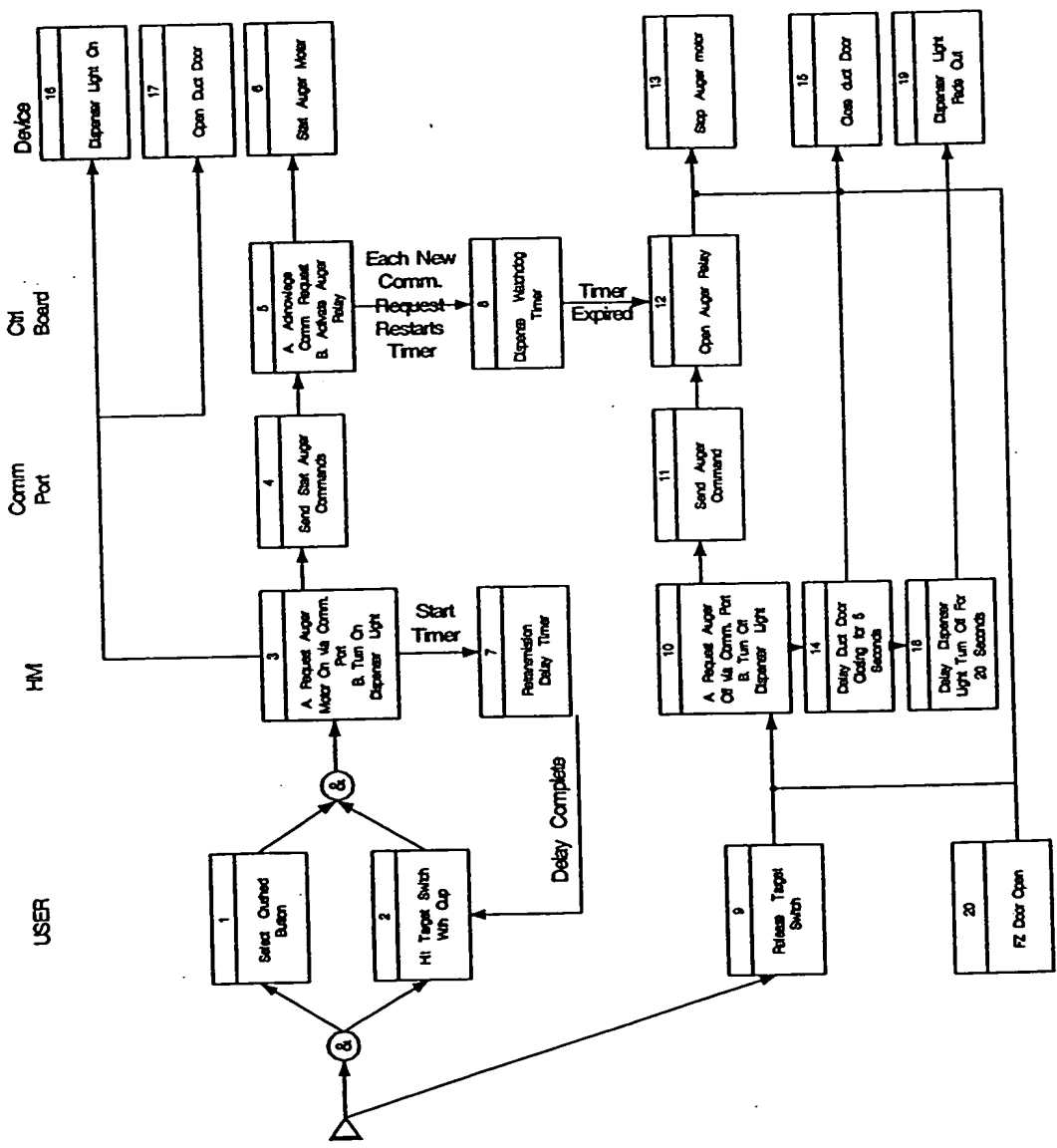
## Water Dispenser Interactions

Fig 22

21/55

TOP SECRET 000000000000

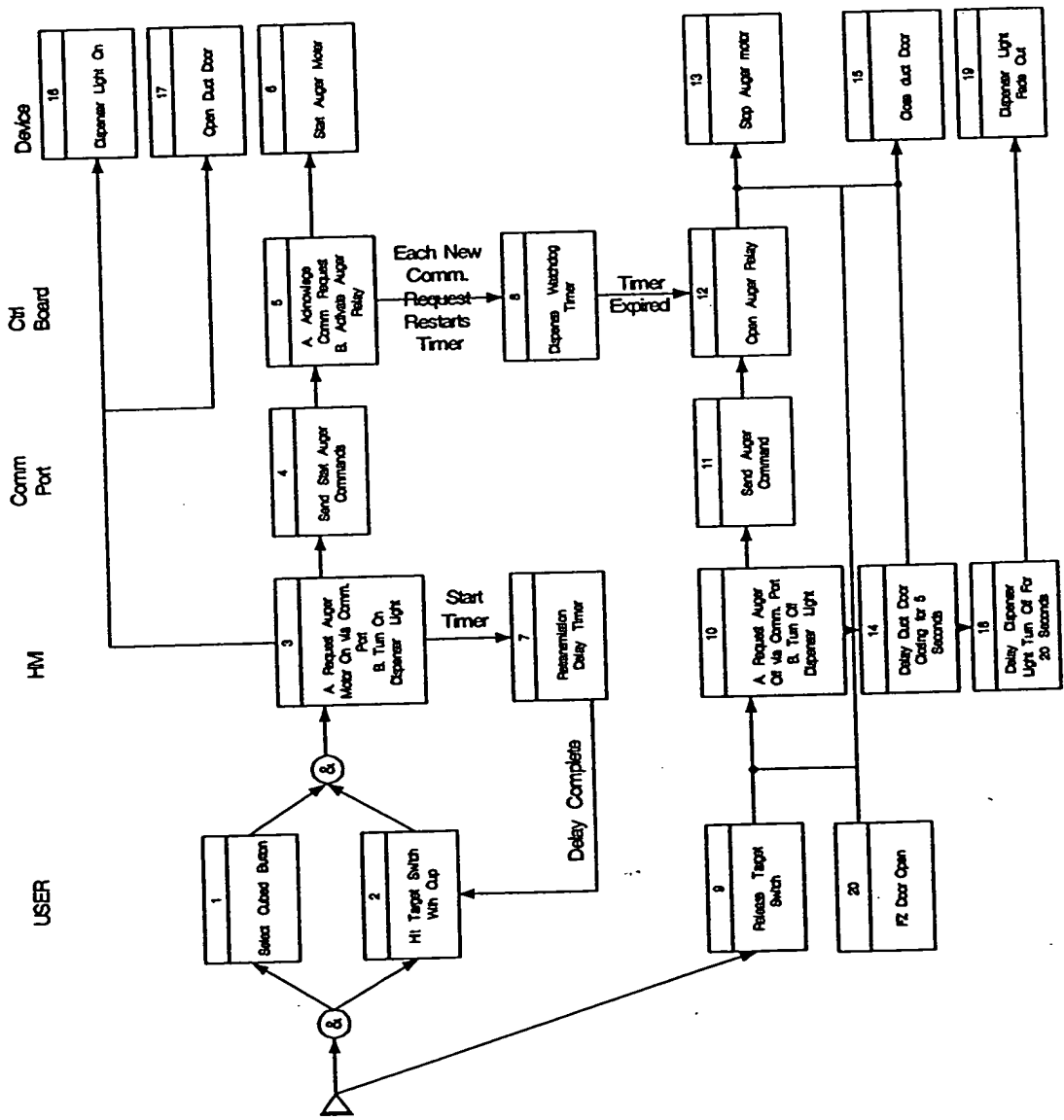
490



Crushed Ice Dispenser Interactions

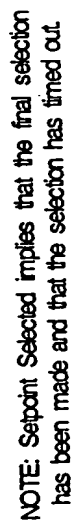
Fig 23

1050498 00000000



Cubed Ice Dispenser Interactions  
Fig 24

494



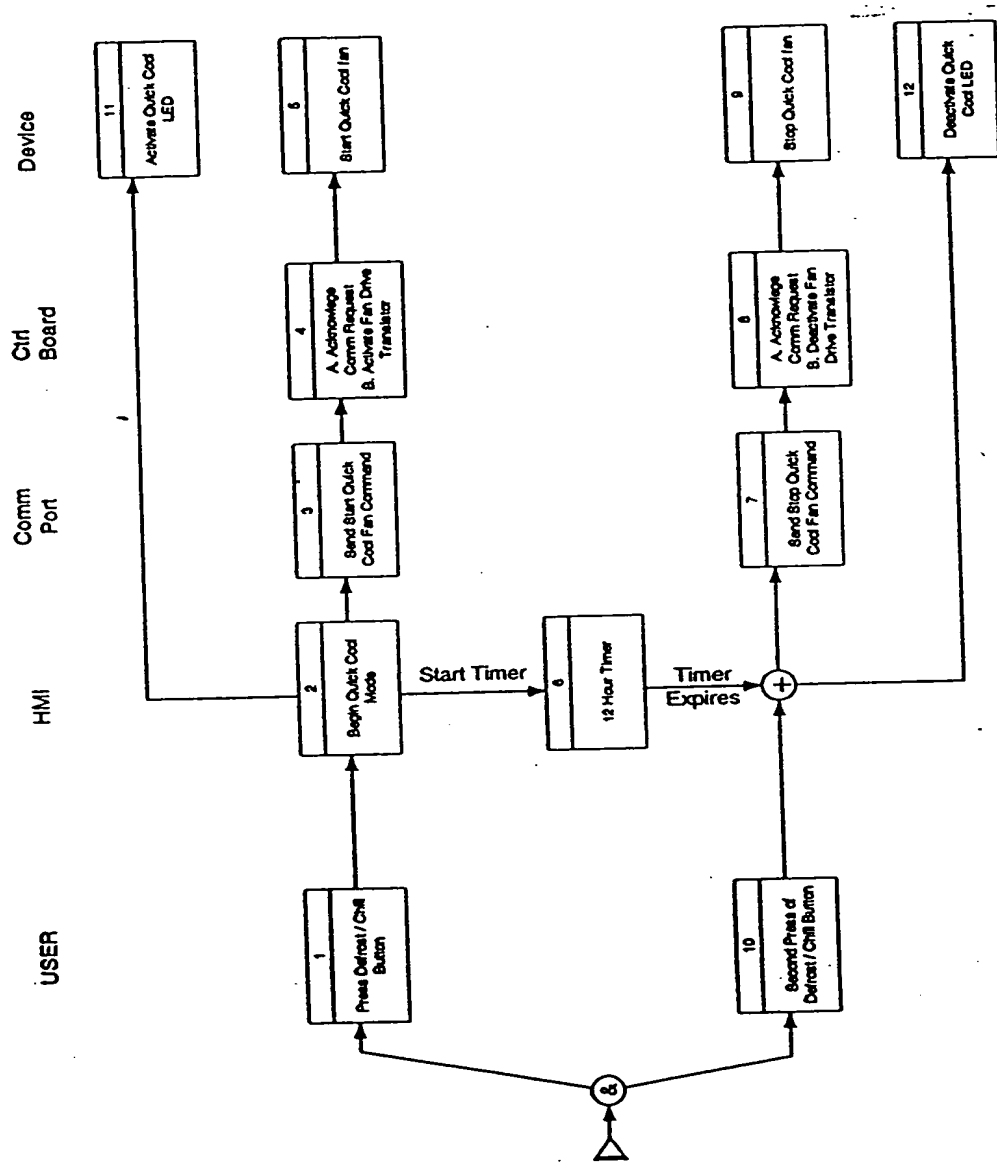
## Temperature Setting Interaction Diagrams

15

23/55

24/55

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Quick Chill Interaction Diagram

F.926

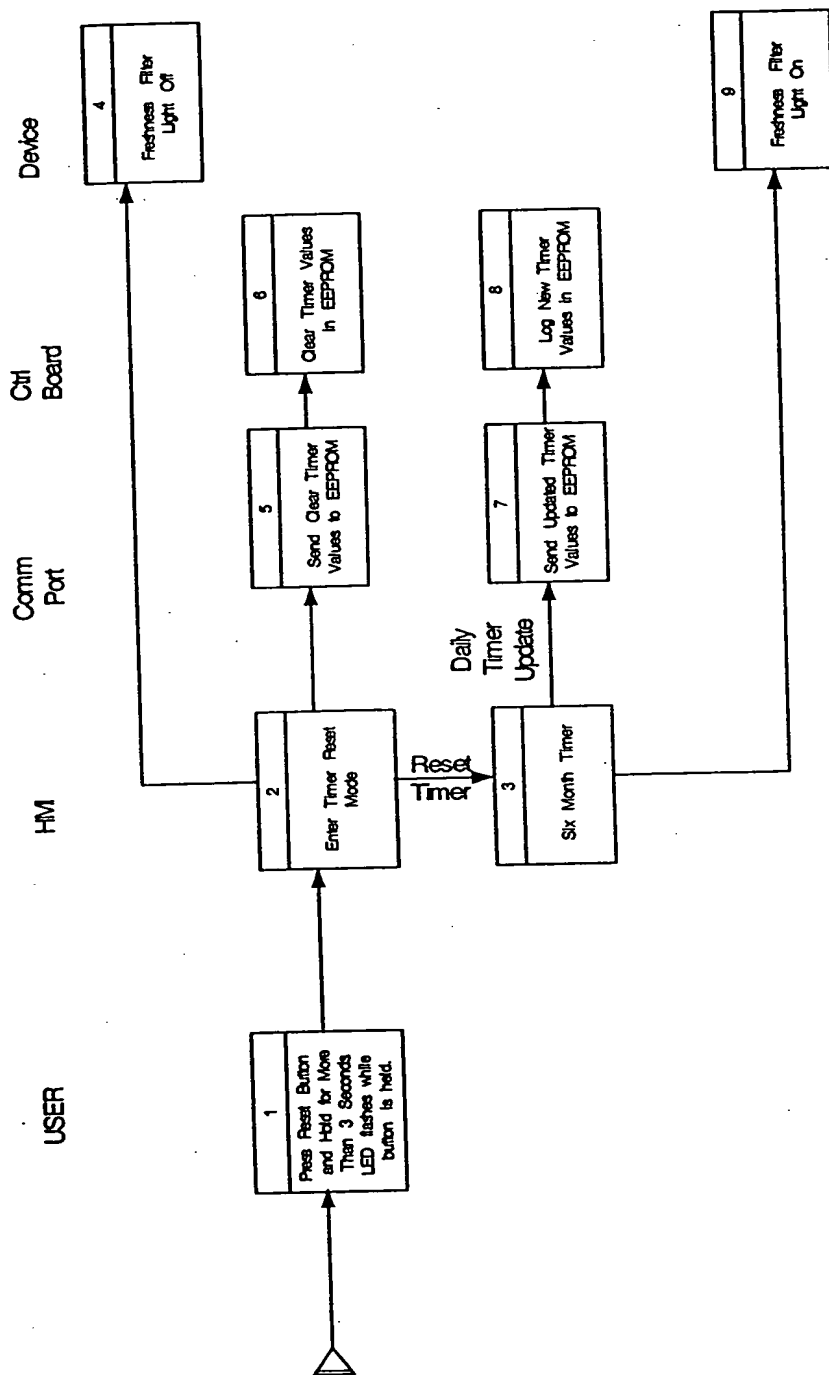


4498



F1927

50

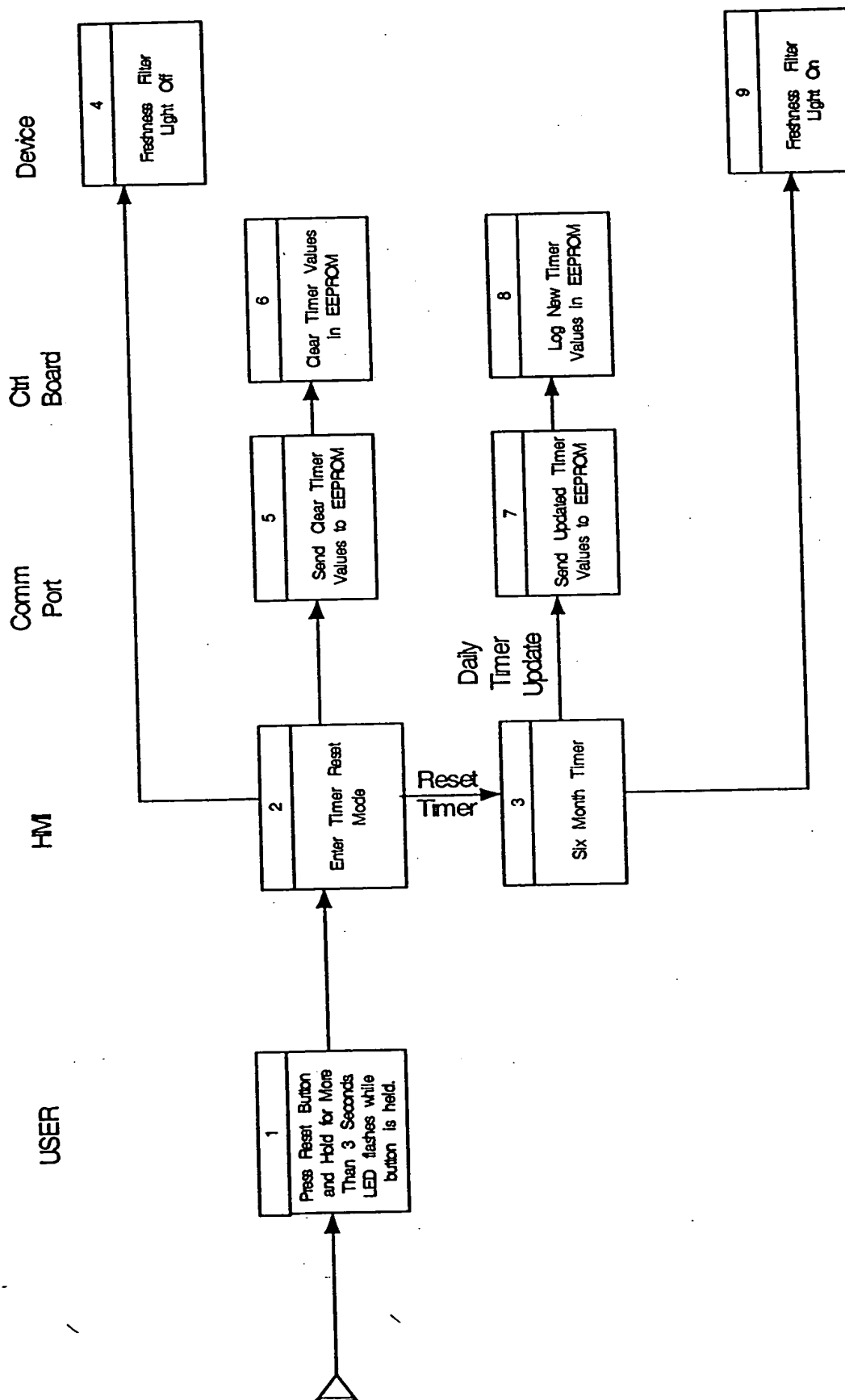


### Freshness Filter Reminder Interaction

Fig 2.8

26/55

502 →



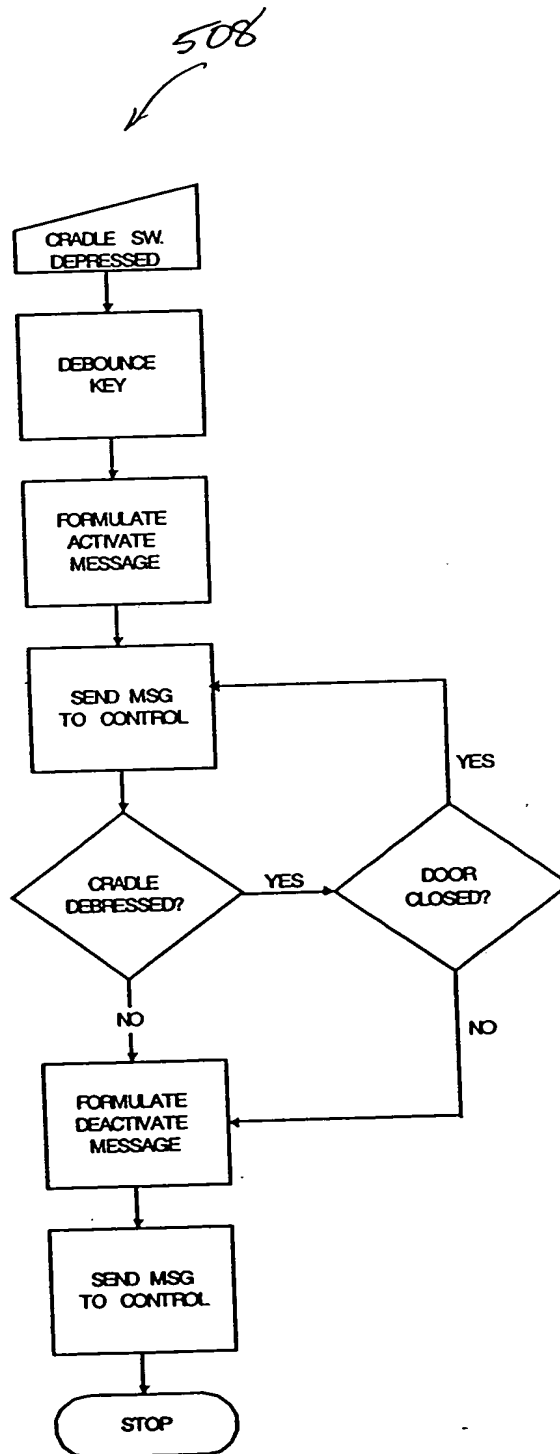


SS/60

505



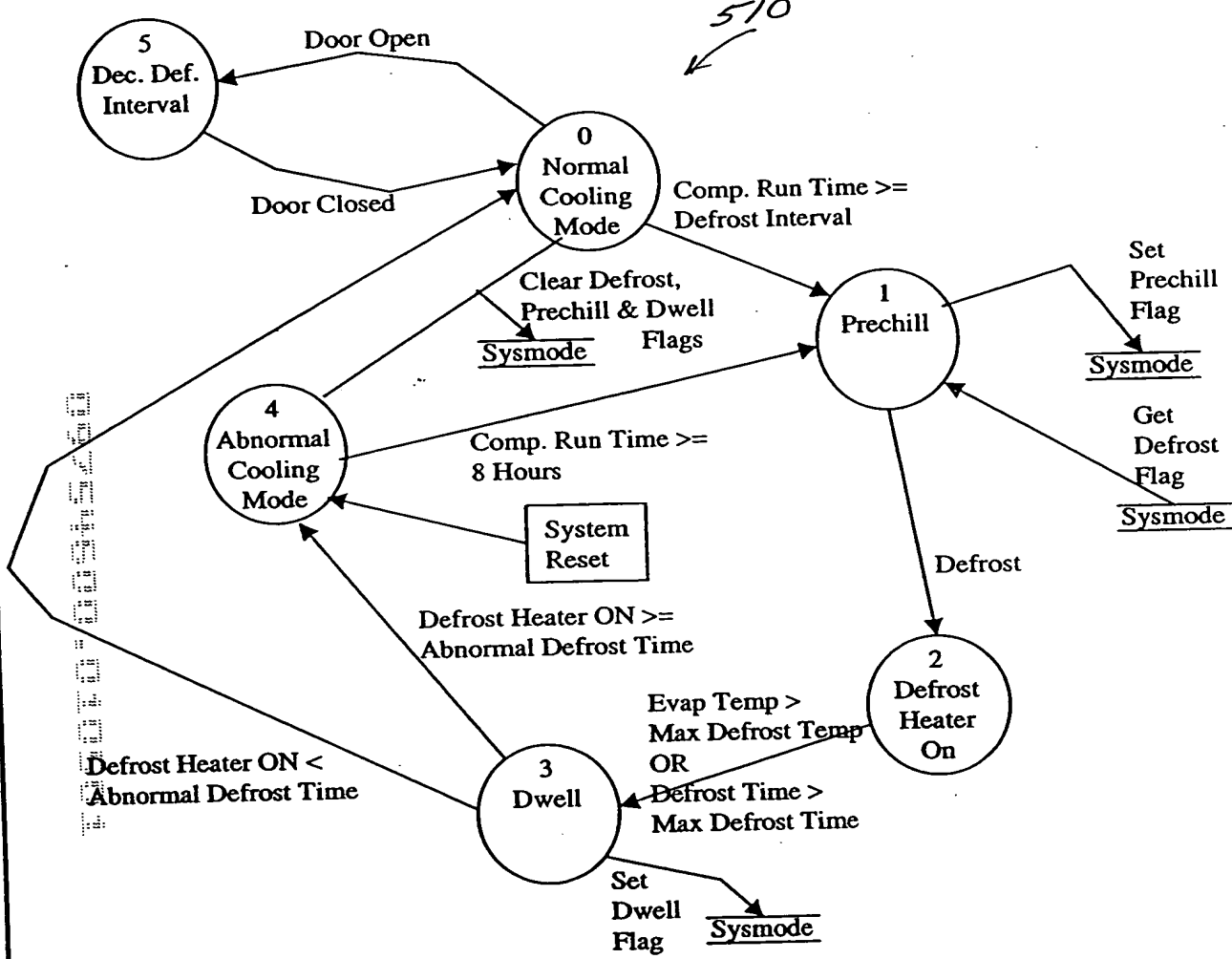
Fis 31



Dispenser Control Algorithm

Fig 32

# Defrost Algorithm



Defrost Control State Diagram

Fig 33

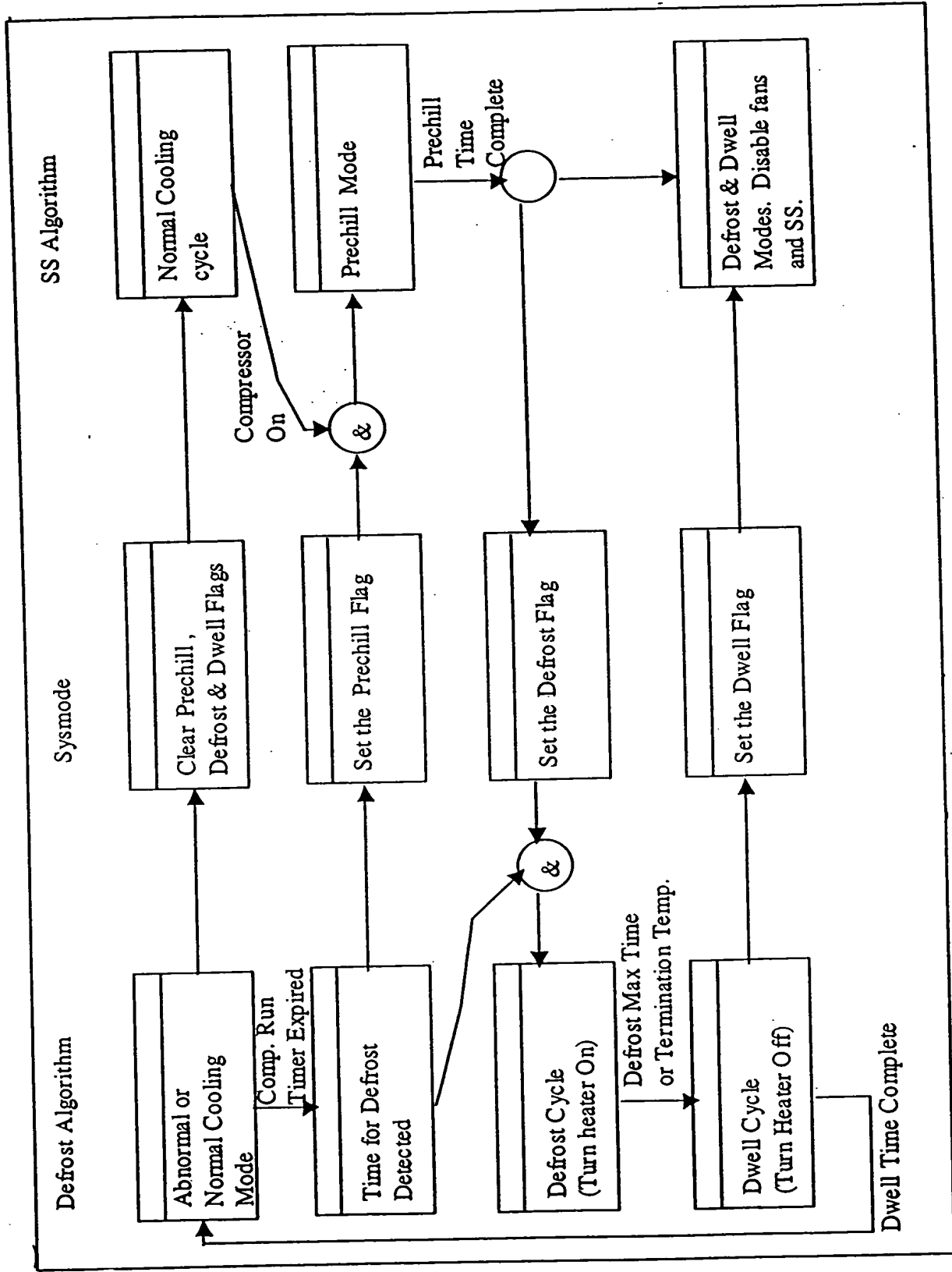
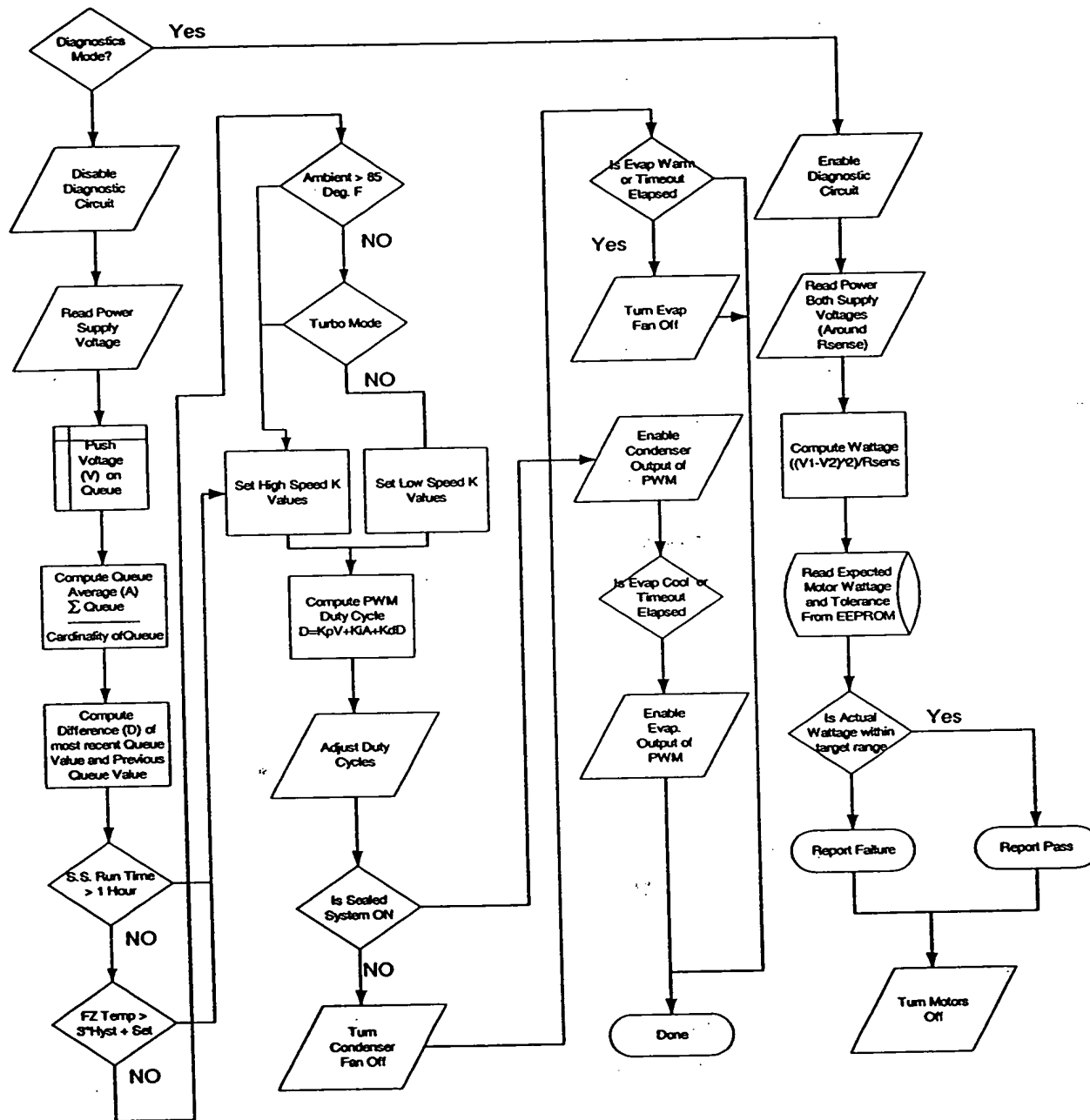


Fig 34



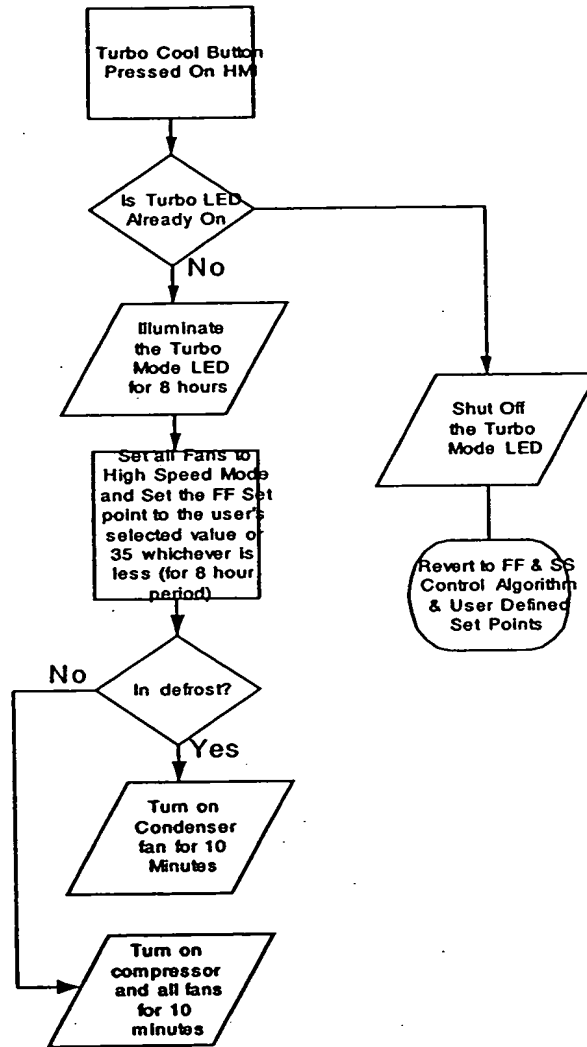
# Evap. & Cond. Fan Control:



## Fan Speed Control

- Notes:
1. The FF & Evaporator fans will shut off for the first five minutes that the door is open.
  2. Only one fan at a time can be on at a time during diagnostics.
  3. Once the fan has been switched to high speed, it remains in that state until the operational cycle is complete.

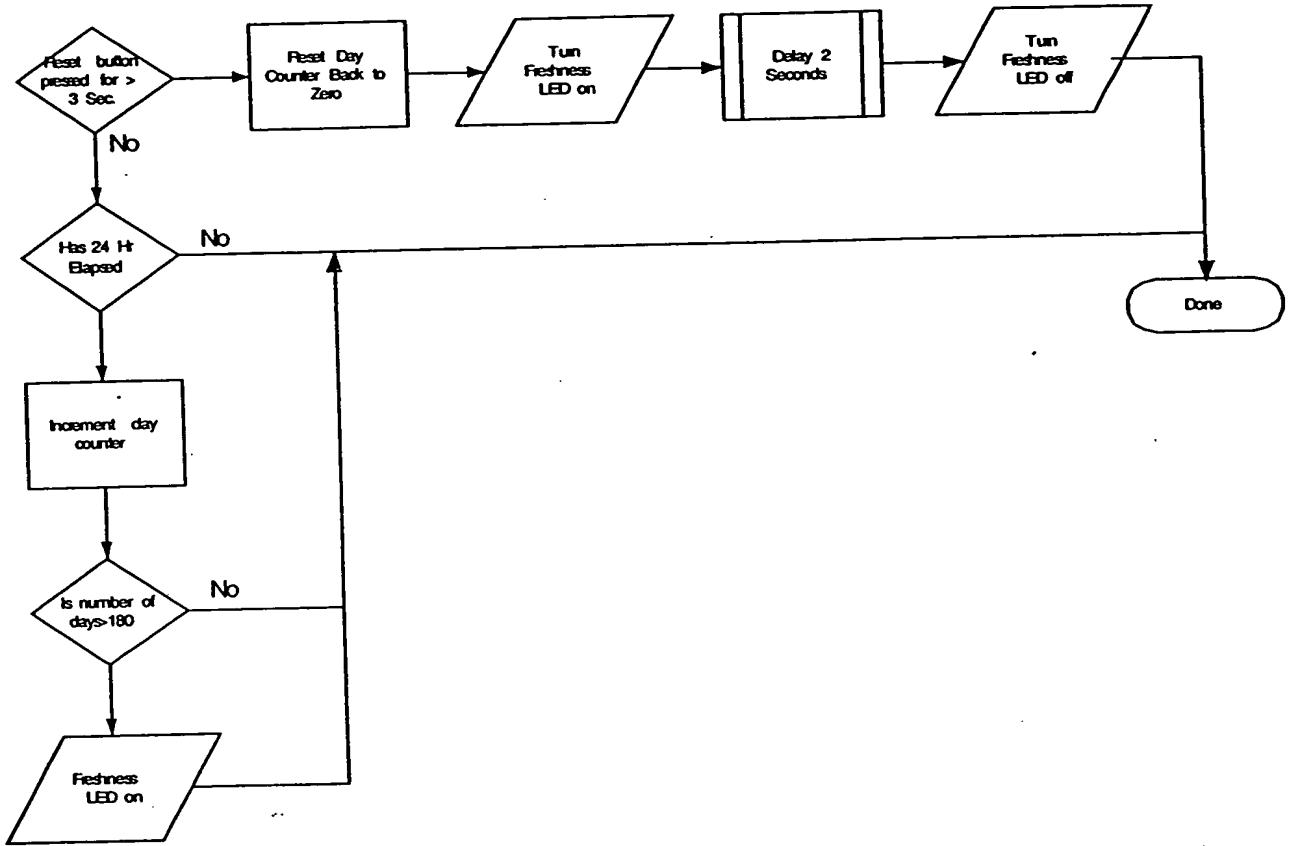
FIG. 35

516  
↓

TURBO CYCLE ALGORITHM  
Fig 36

318

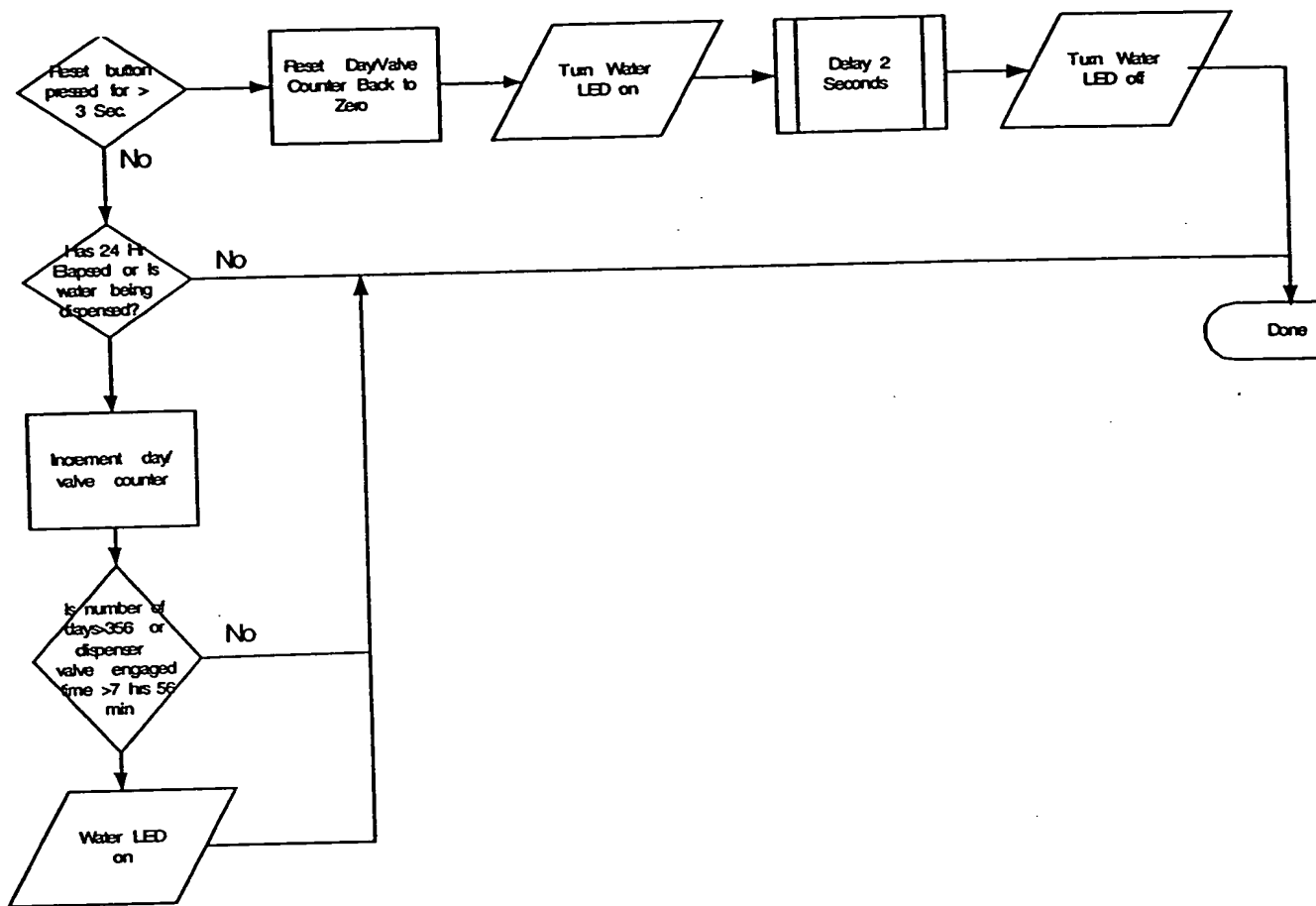
# Change Freshness Filter:



Freshness Filter Reminder Algorithm

Fig 37

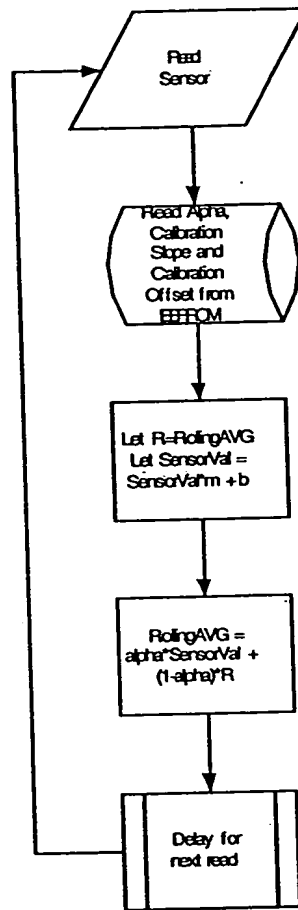
520



Water Filter Reminder Algorithm

Fig 38

522

**SENSOR READ AND ROLLING AVERAGE ALGO:****Sensor Reading Algorithm****NOTE:**

Fresh food average uses this algorithm twice to create a 2<sup>nd</sup> pole filter.

Fig 39

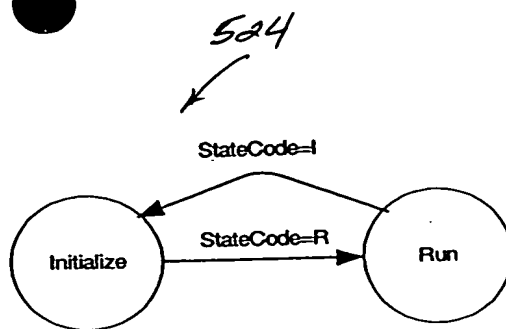
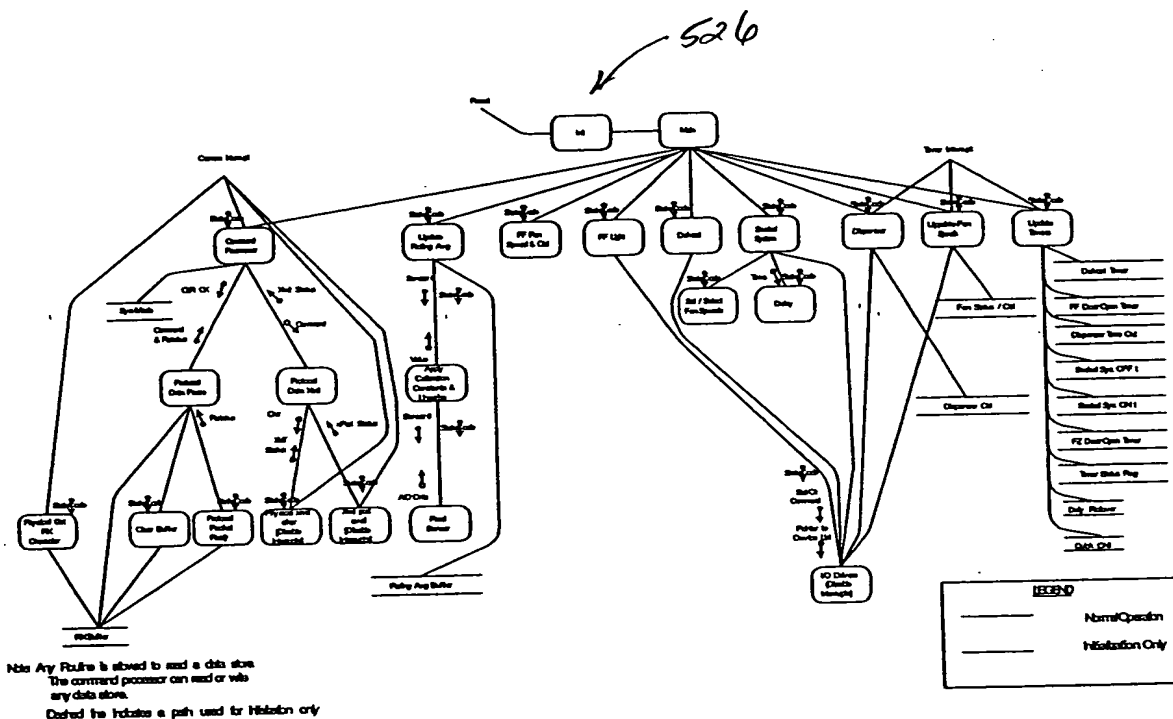
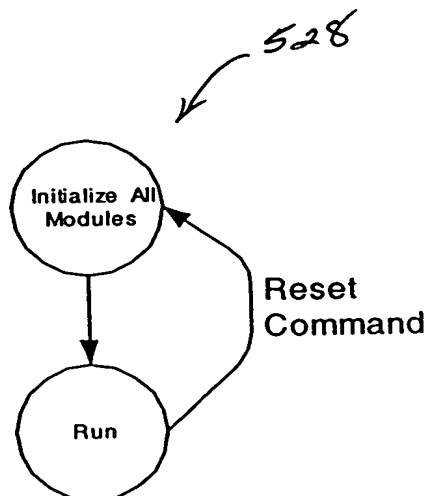


Fig. 40



**Note:** Any Routine is allowed to read a data store.  
The command processor can read or write any data store.  
Default: the indicates a path used for Hibernation only

Fig. 41



STATE DIAGRAM FOR MAIN CONTROL  
Fig. 42

# HMI MAIN STATE MACHINE

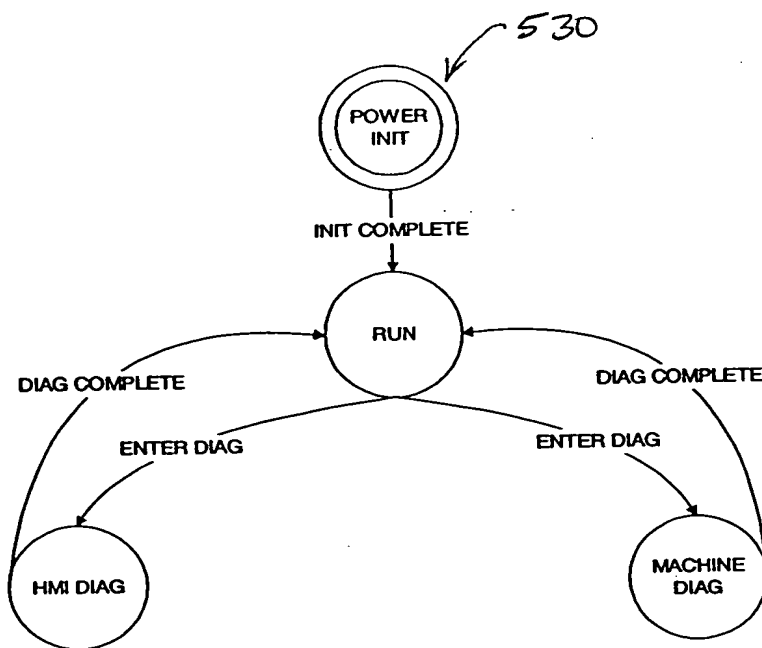
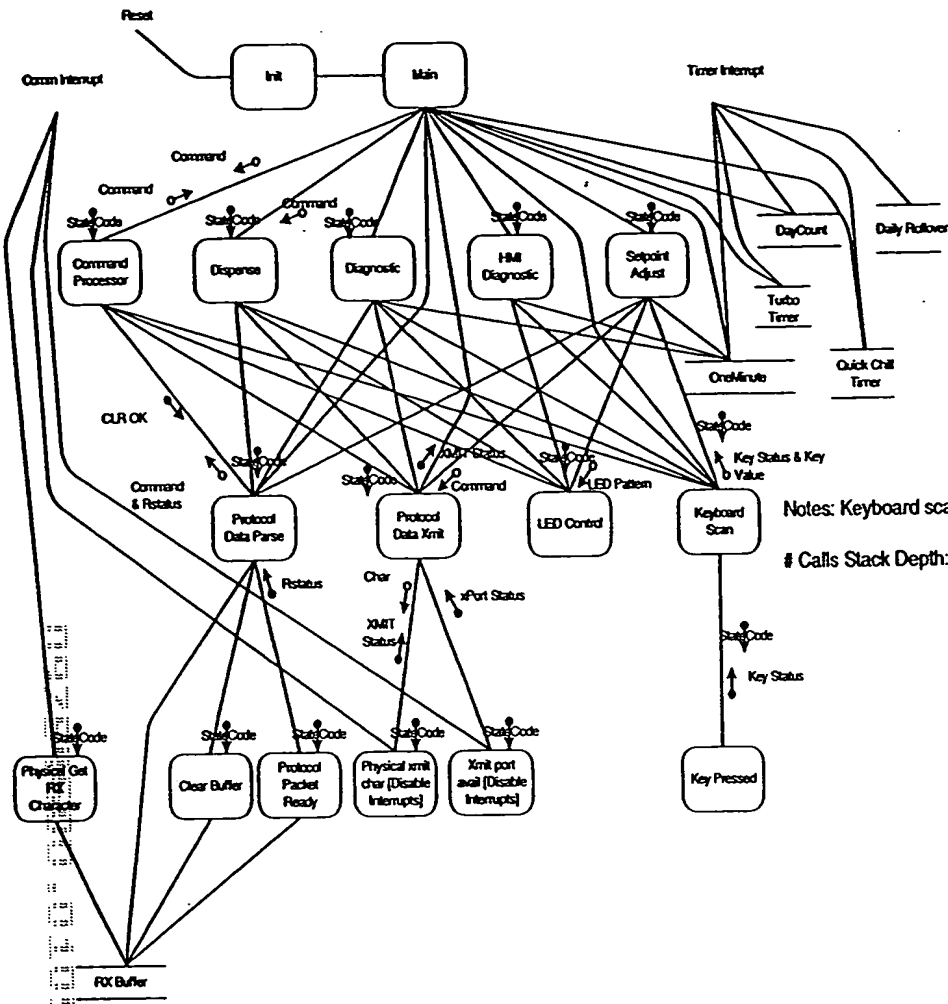


Fig. 43

00754600-010504

532

HMI Software



Notes: Keyboard scan should return the last key hit and whether a key is presently being pressed.  
 # Calls Stack Depth: Main->Diag->Keyboardscan-> KeyPressed->Com Interrupt -> Physical get character

Fig. 44



rpm inputs are created - see last page - add noise cap  
 sense diodes on power supply  
 EN GC RELAY  
 CHECK 3 dispenser function-pull-down values?  
 OPTO ON P8  
 CHECK 17 DRIVE 0 - NO 3P7002  
 NEW RELAYS  
 NEW .1 5240  
 mounting hole diameter .1875/-0  
 Door 21 - change to 1ur and series a

534

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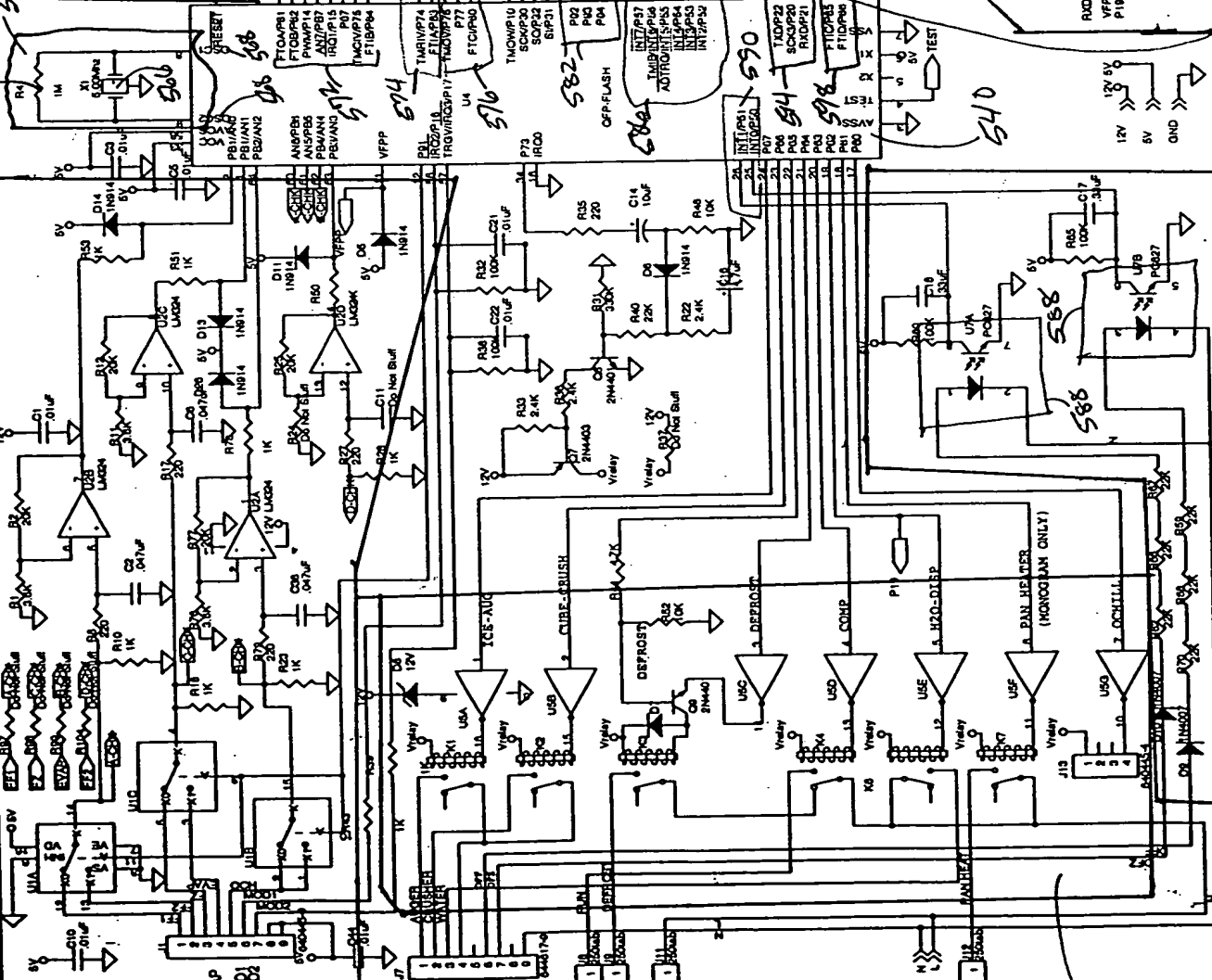
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11.11.15

53

4/55

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Rev	Doc	Doc Number	Doc Date
1	1	1000000000	10/10/10

ss/ef

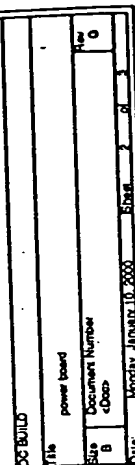
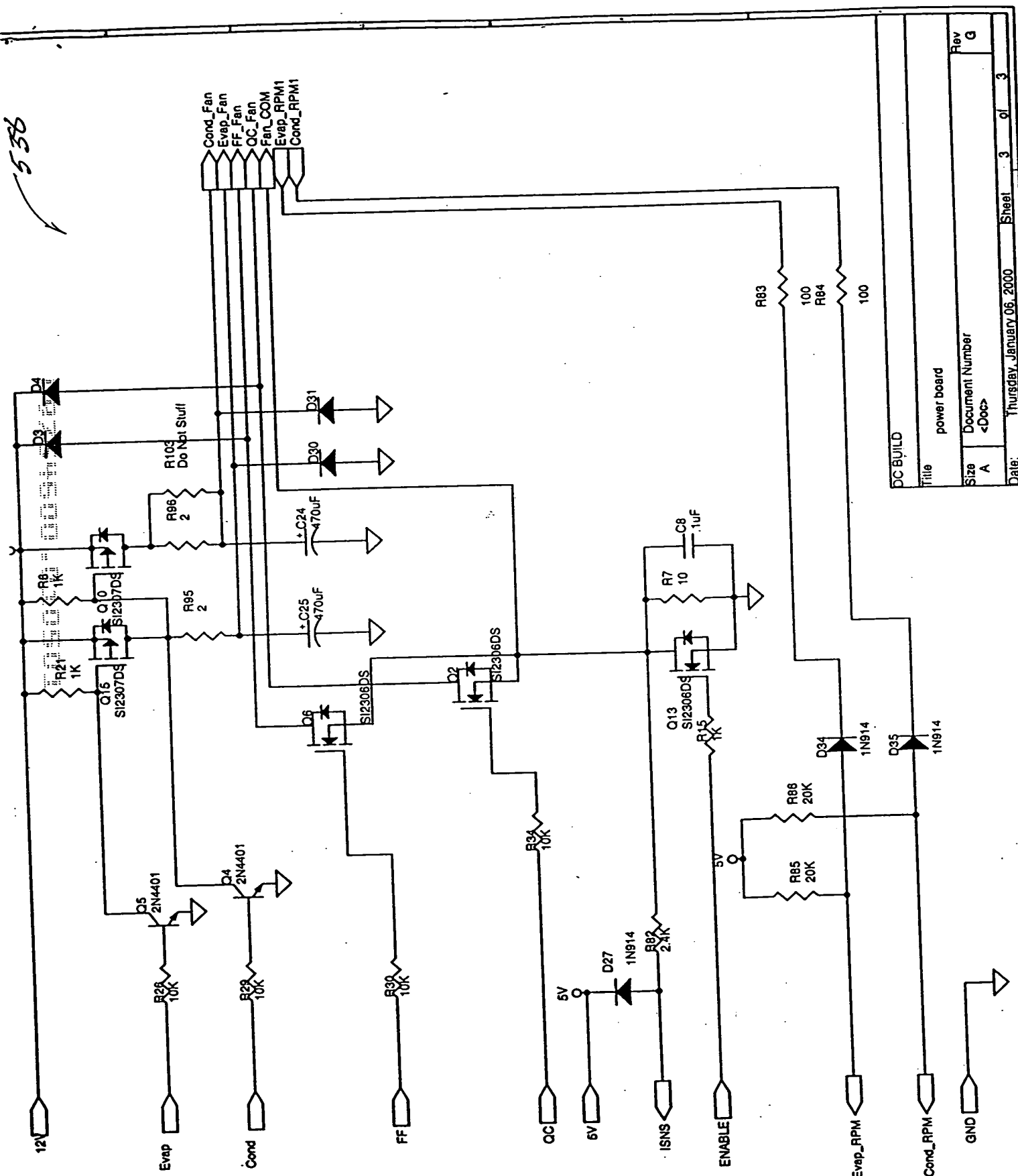


FIGURE 45



DC BUILD	
Title	
power board	
Size	Document Number
A	<Doc>
Rev	Q
Sheet	3 of 3
Date:	Thursday, January 06, 2000

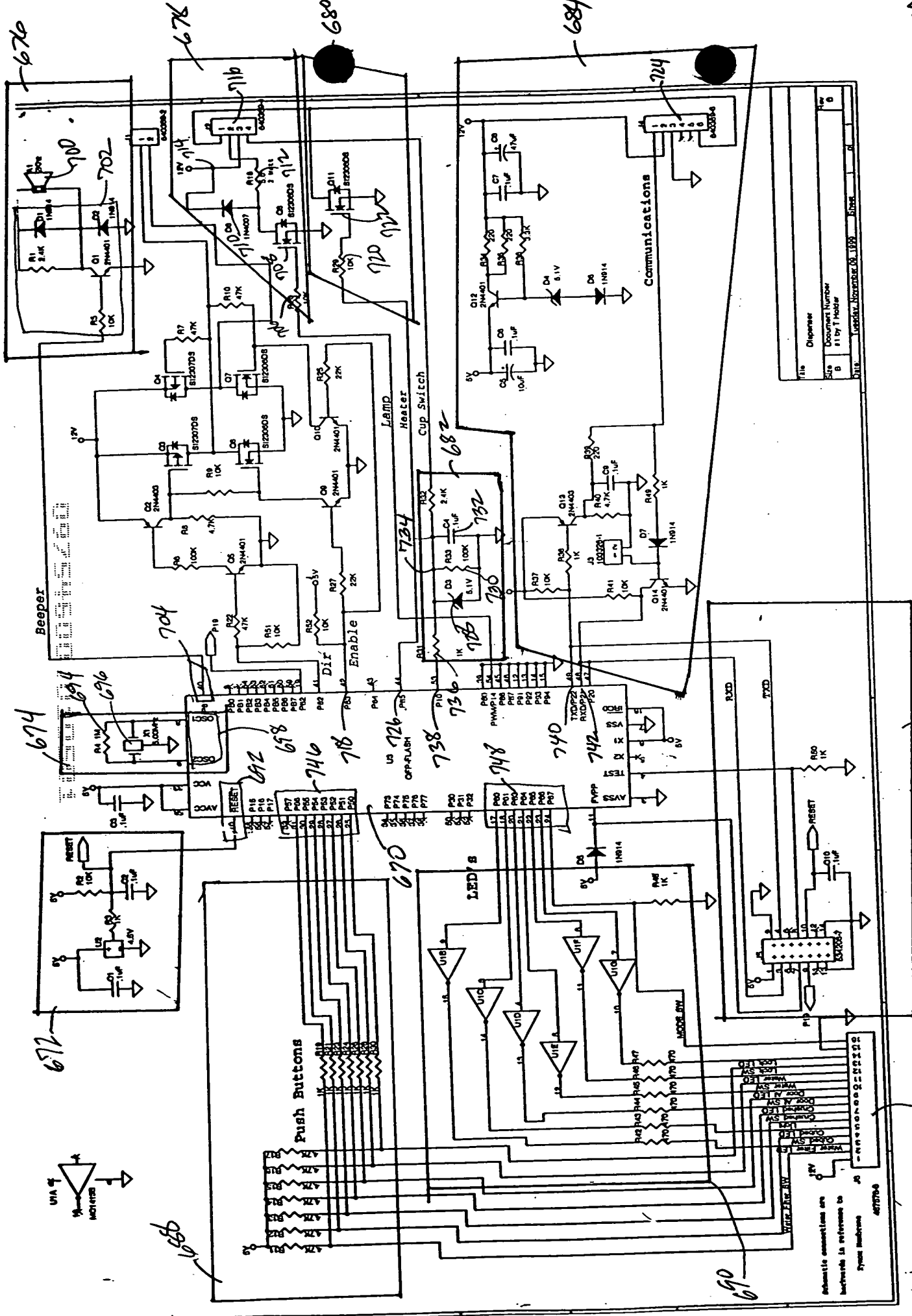


FIGURE 46

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686

744

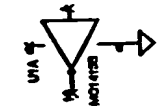
690

684

680

678

676



Schematic connections are  
backwards in reference to  
Symbol Numbers

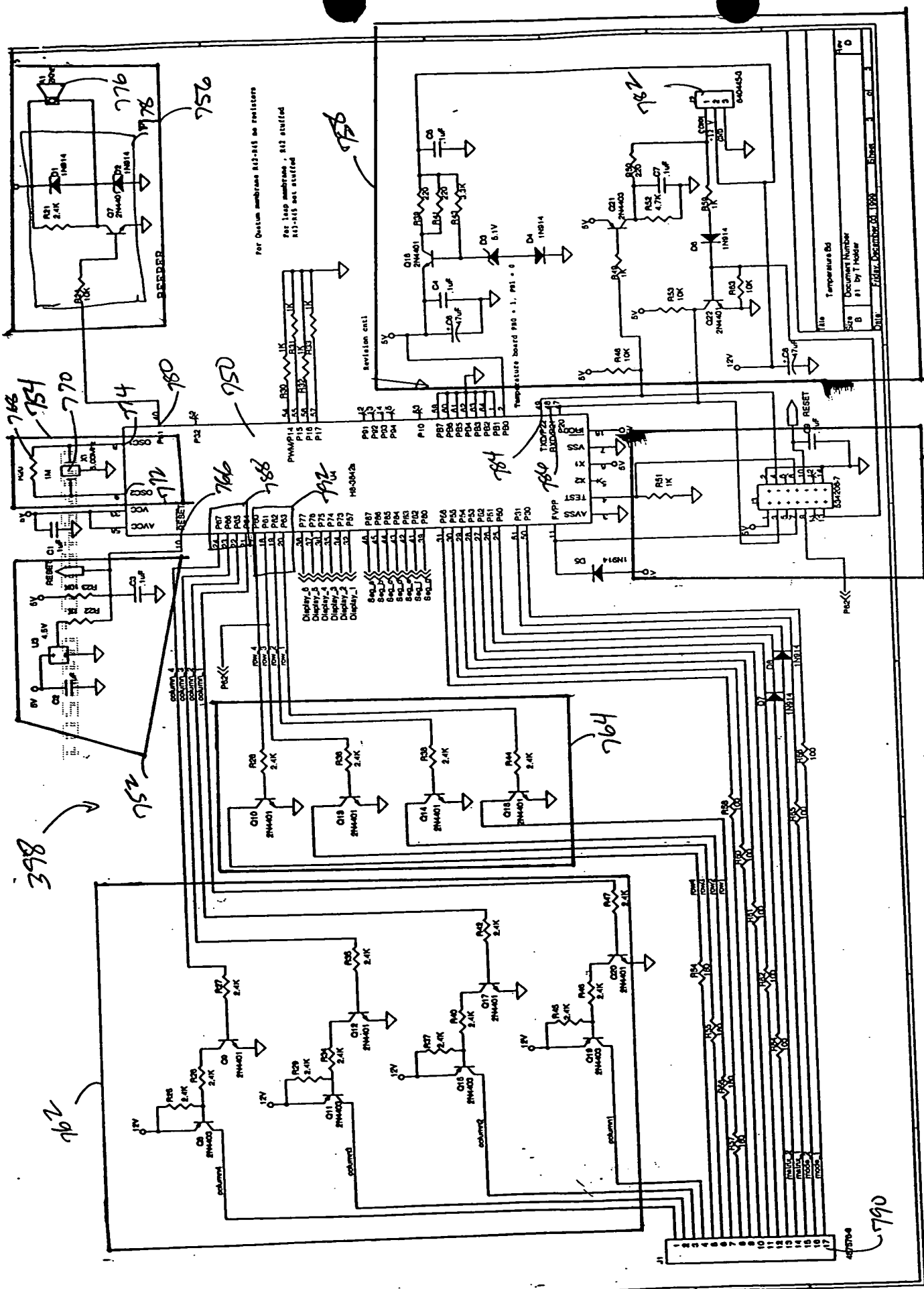


FIGURE 47

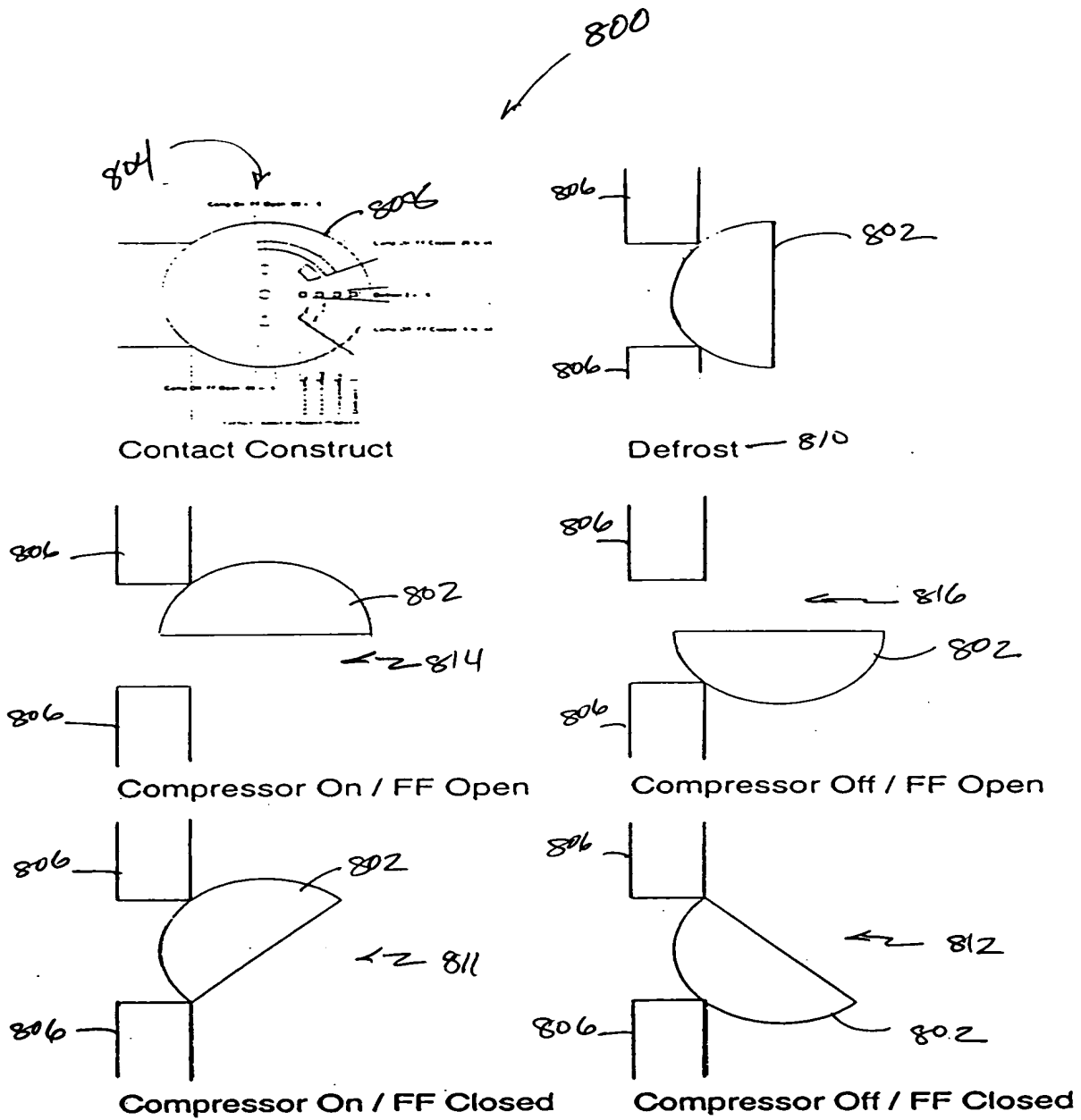


FIG. 48

FIG. 6

820

822

820

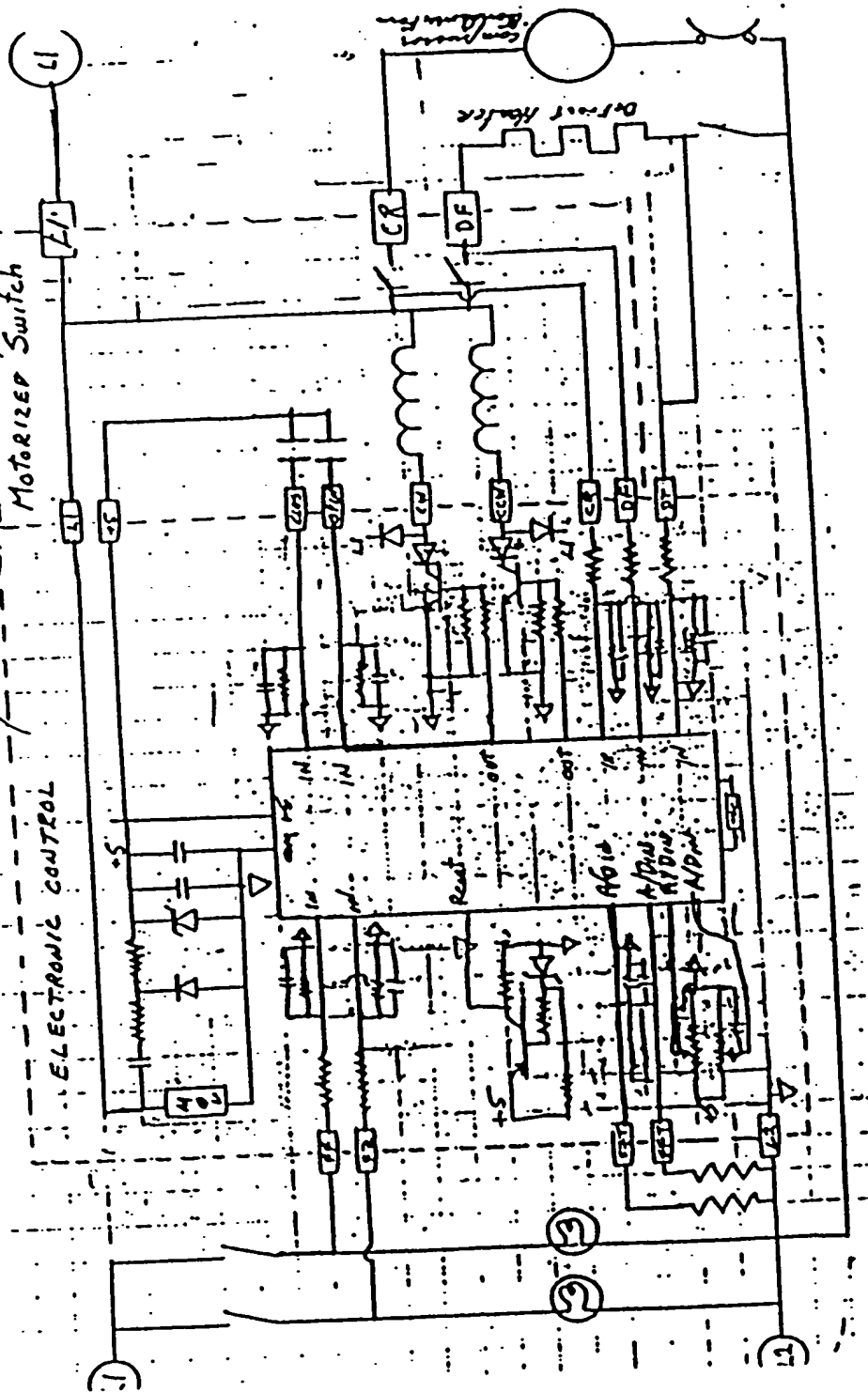


FIG. 49

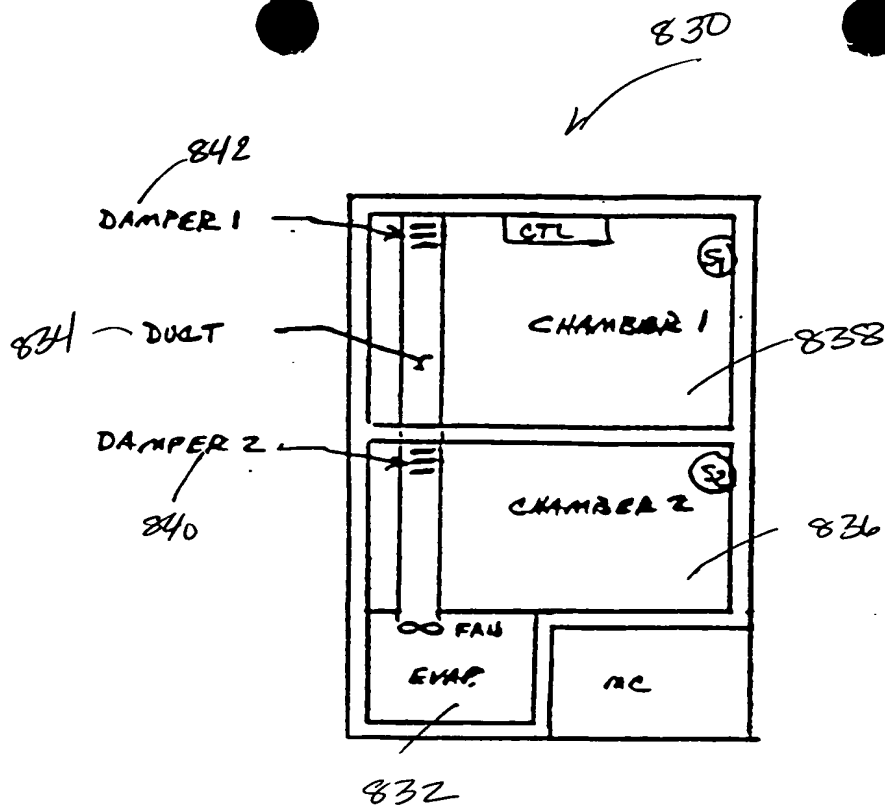


FIG. 50

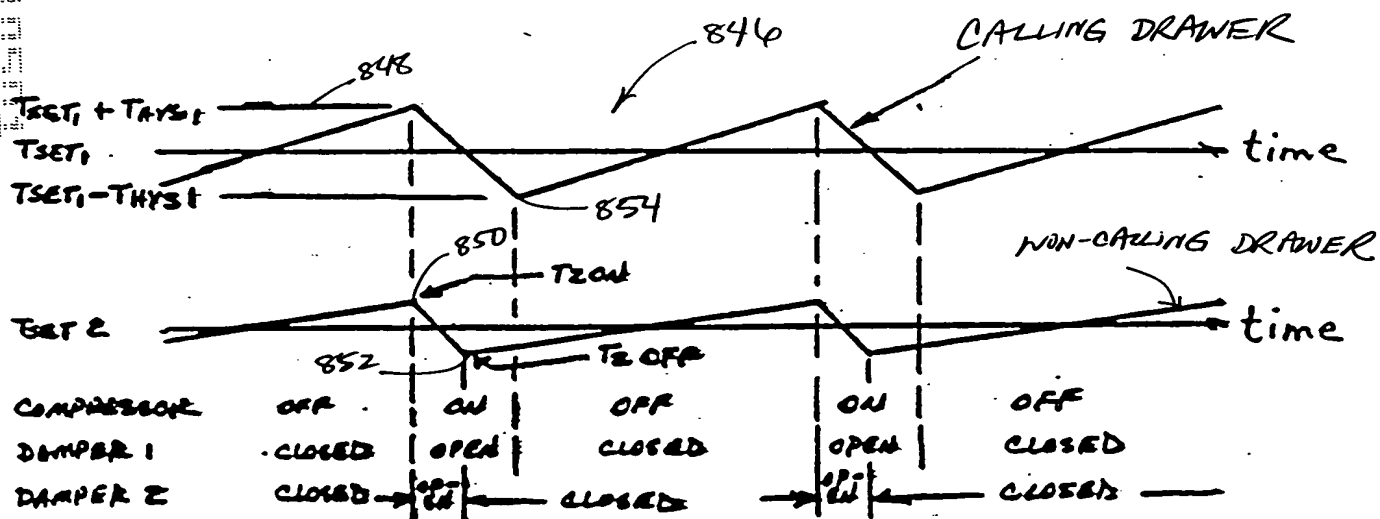
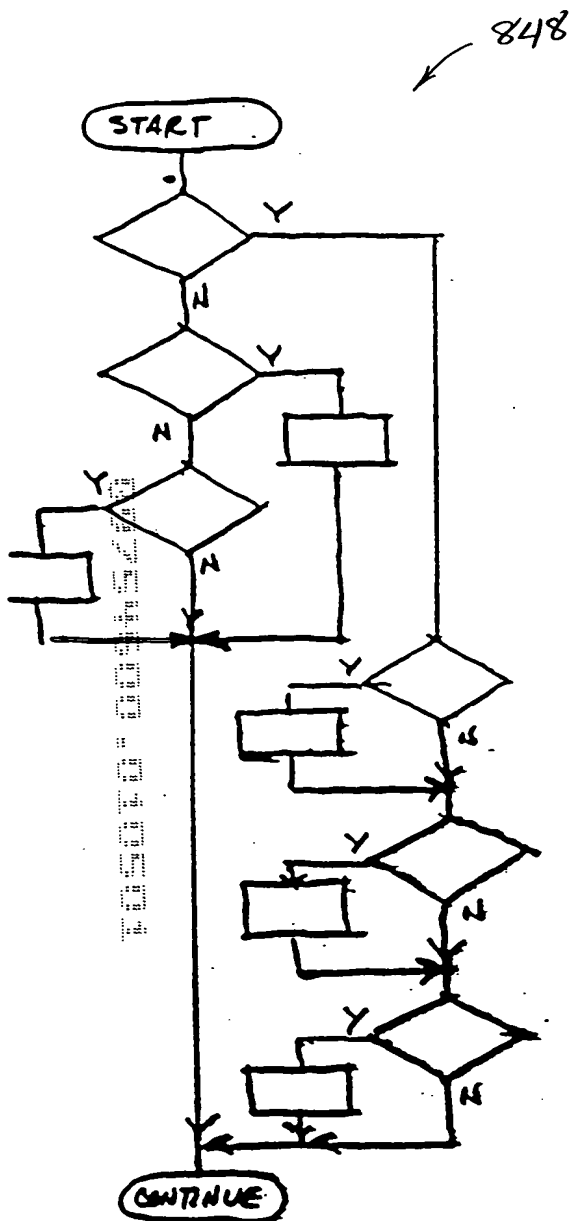


FIG. 51





COMPRESSOR ON ?

TEMP CHAMB1  $\geq$  TSET1 + THYS1 ?

COMPRESSOR & FANS  $\rightarrow$  ON

STORE TEMP OF CHAMB2 AS T2 ON

CALC. T2 OFF = T2 SET - (T2 ON - T2 SET)

SET T1 OFF = T1 SET - T1 HYS

TEMP CHAMB2  $\geq$  TSET2 + THYS2 ?

COMPRESSOR & FANS  $\rightarrow$  ON

STORE TEMP CHAMB1 AS T1 ON

CALC. T1 OFF = T1 SET - (T1 ON - T1 SET)

SET T2 OFF = T2 SET - T2 HYS

TEMP CHAMB1  $\leq$  T1 OFF ?

CLOSE DAMPER 1

TEMP CHAMB2  $\leq$  T2 OFF ?

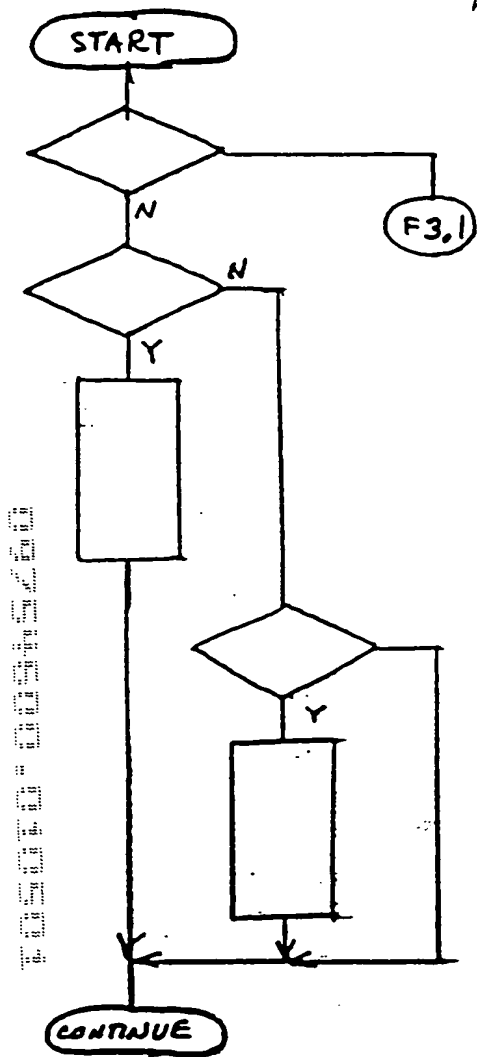
CLOSE DAMPER 2

ALL DAMPERS CLOSED ?

TURN OFF COMPRESSOR & FANS

FIG. 52

850



COMPRESSOR ON?

$$T_1 \geq T_{1 \text{ MAX}}$$

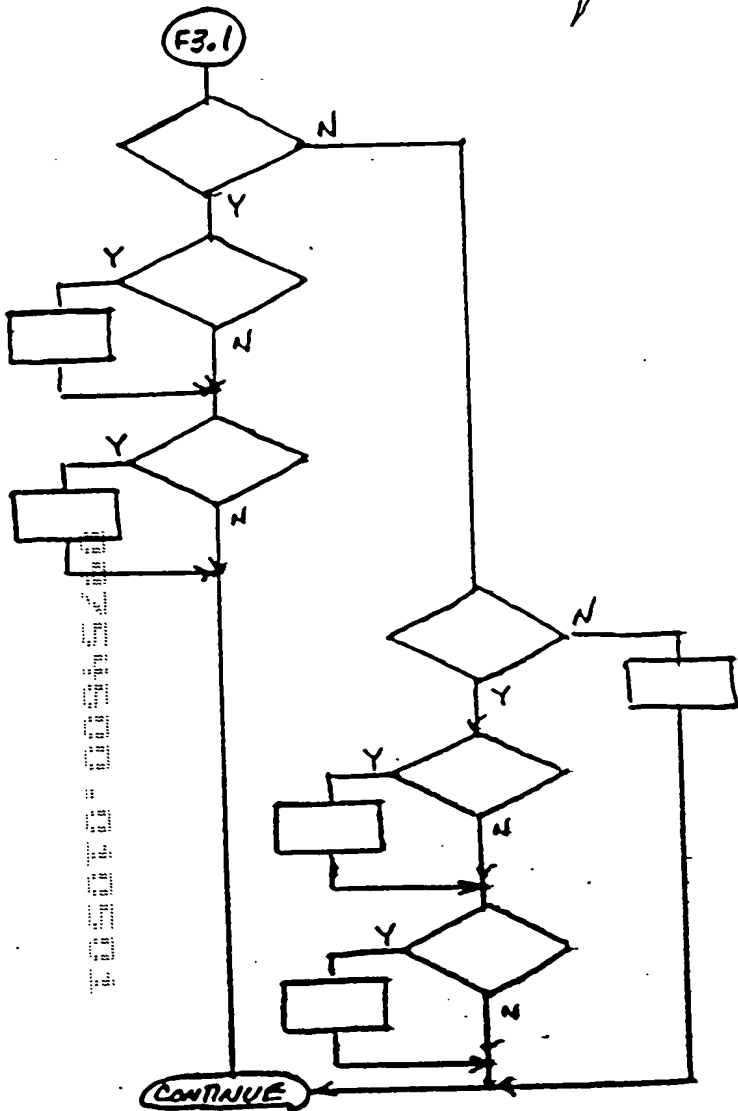
SET DAMPER FOR EQUAL AIR FLOW  
 TURN COMPRESSOR AND FANS ON  
 SET CONDITION 1 FLAG  
 SET  $T_{2 \text{ ON}} = T_2$

$$T_2 \geq T_{2 \text{ MAX}}$$

SET DAMPER TO MAX AIR FLOW  
 TURN COMPRESSOR AND FANS ON  
 SET CONDITION 2 FLAG  
 SET  $T_{1 \text{ ON}} = T_1$

FIG. 53

852



CONDITION 1 FLAG SET ?

$$T_2 \leq T_{2SET} - (T_{2ON} - T_{2SET}) ?$$

CLOSE DAMPER

$$T_1 \leq T_{1MIN} ?$$

TURN COMPRESSOR AND FANS OFF  
RESET CONDITION 1 FLAG

CONDITION 2 FLAG SET ?

ERROR - RESTART COMPUTER

$$T_2 \leq T_{2MIN} ?$$

CLOSE DAMPER

$$T_1 \leq T_{1SET} - (T_{1ON} - T_{1SET}) ?$$

TURN COMPRESSOR AND FANS OFF  
RESET CONDITION 2 FLAG

FIG. 54

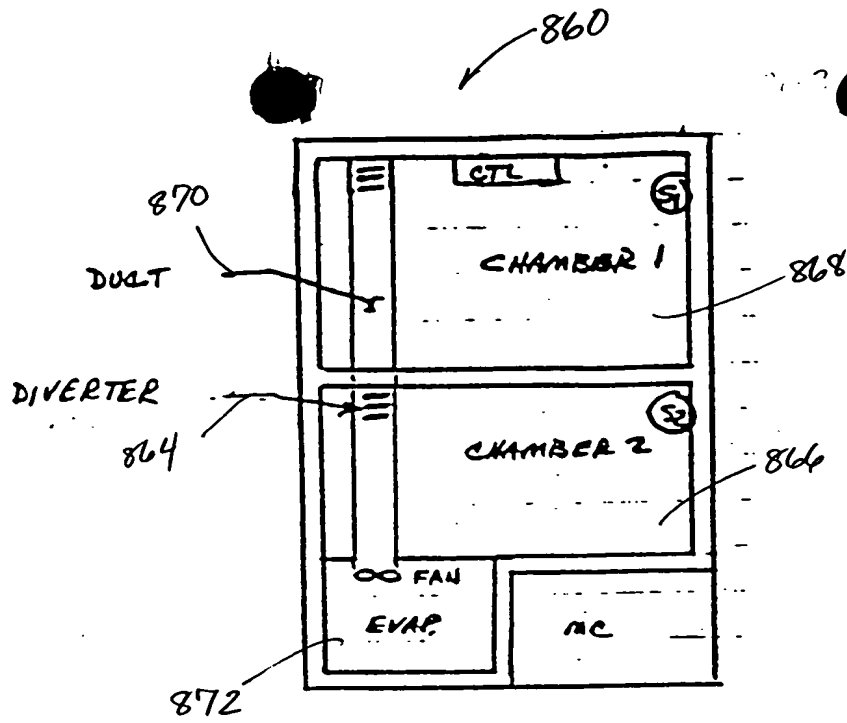


FIG. 55

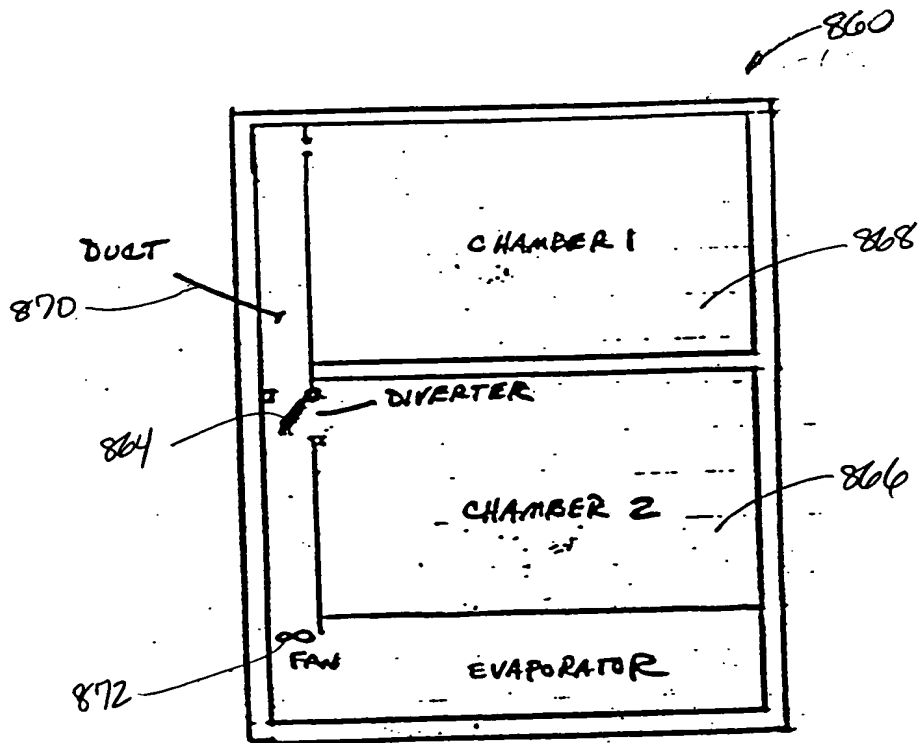
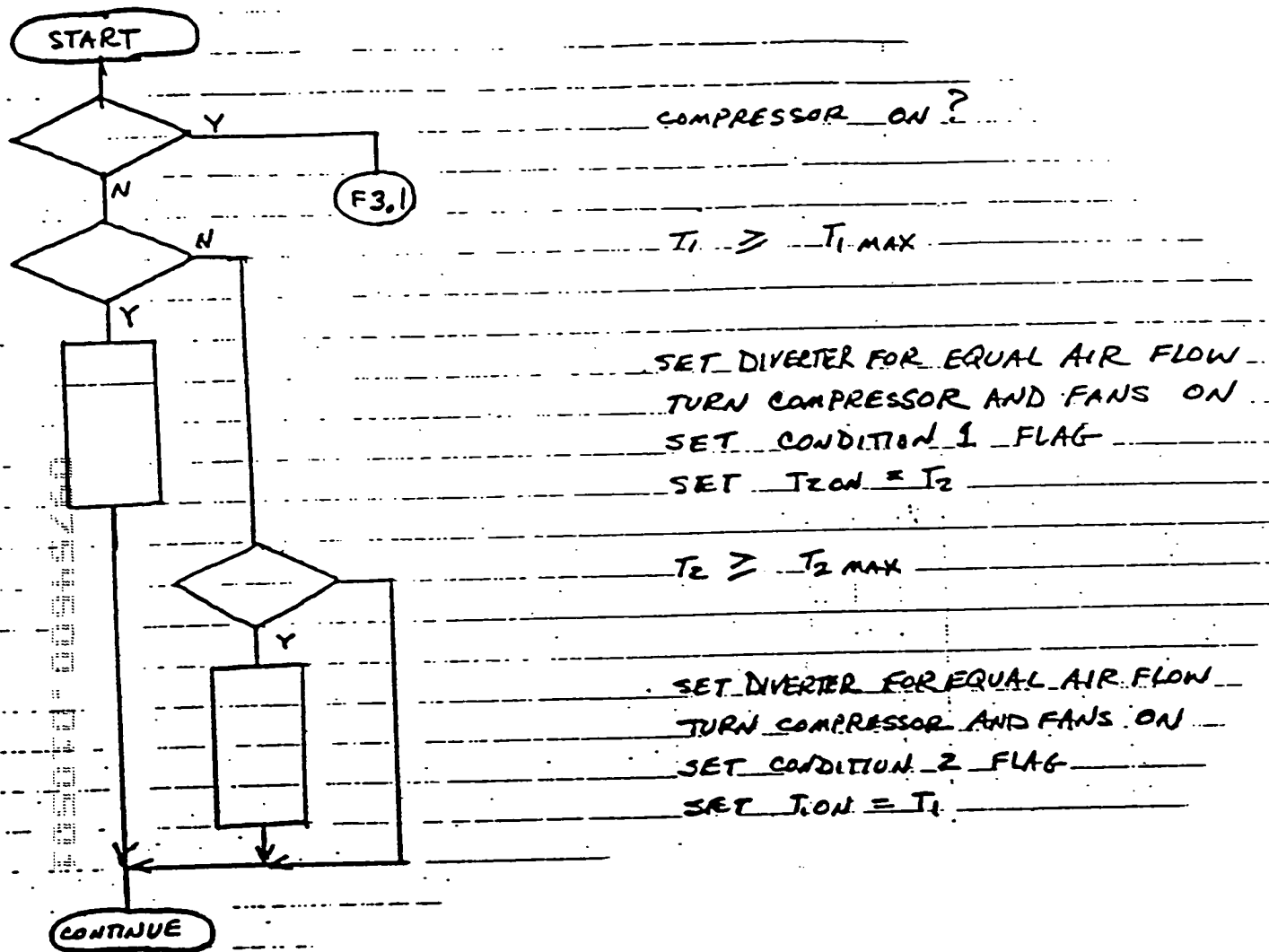


FIG. 56

20250701 00345468



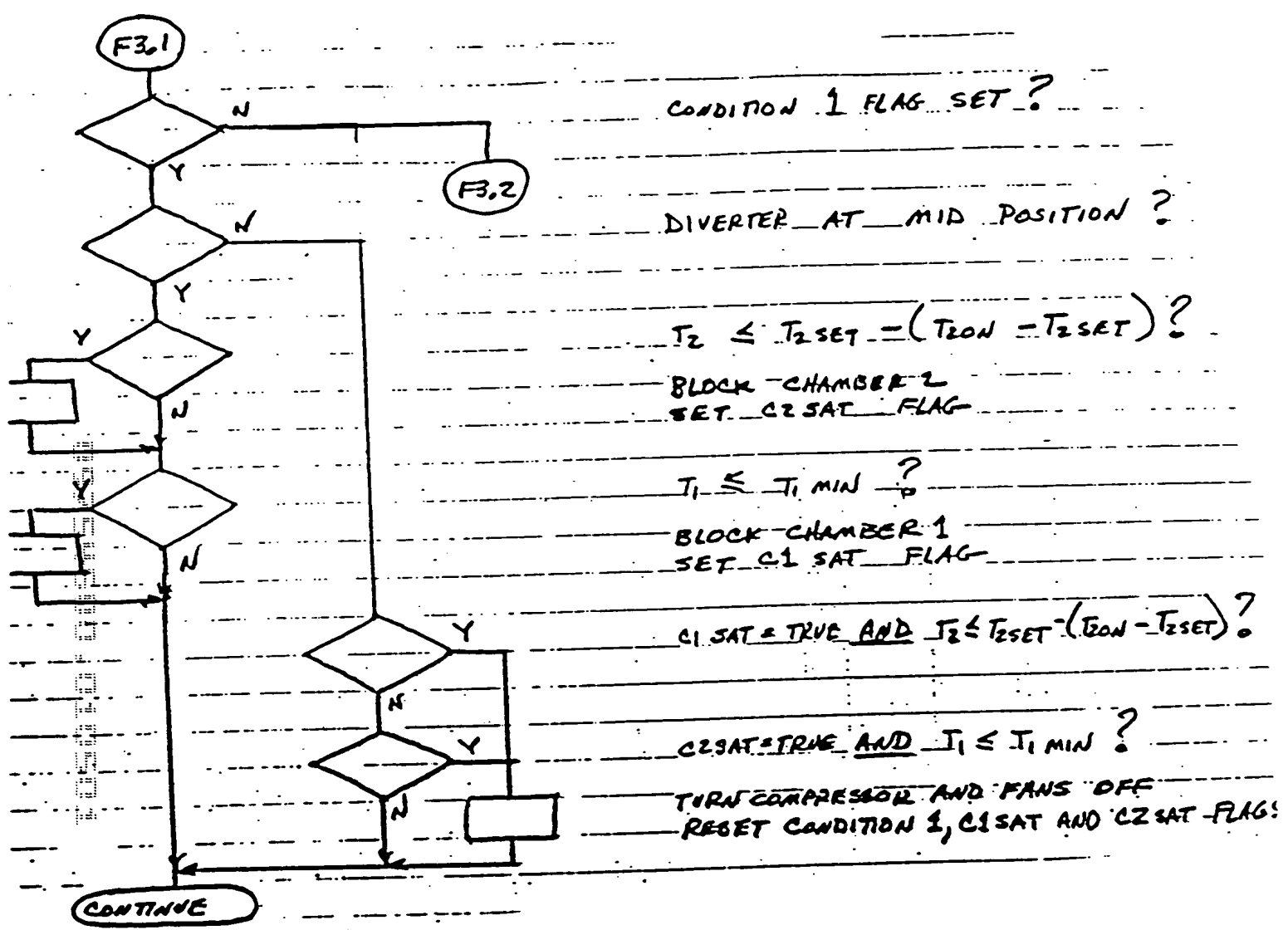


FIG. 58

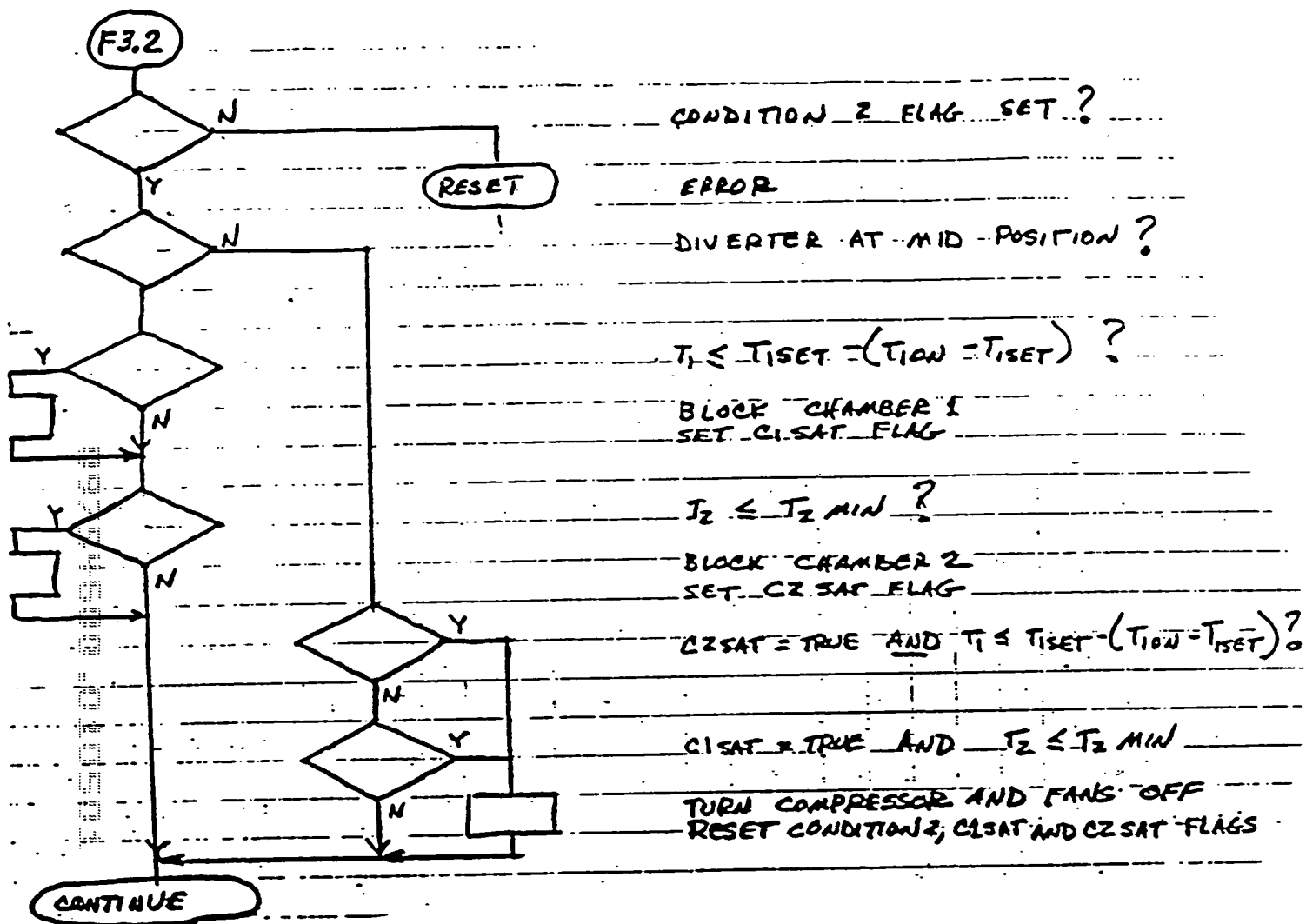


FIG. 59